Teaching Business, Technical and Academic Writing Online and Onsite

A Writing Pedagogy Sourcebook

Sarbani Sen Vengadasalam
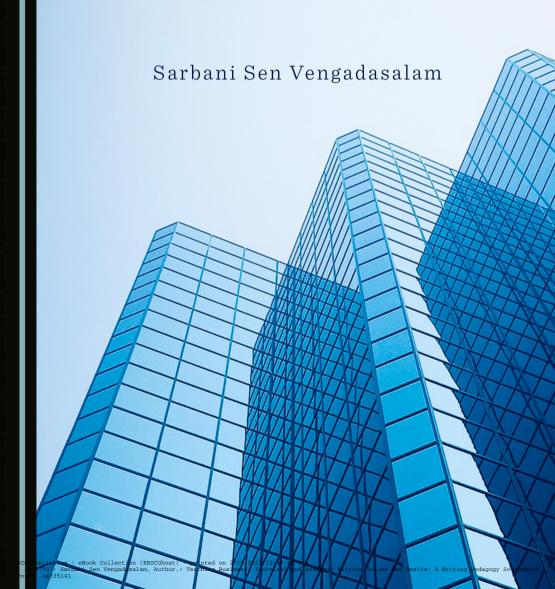
Teaching Business, Technical and Academic Writing Online and Onsite

Teaching Business, Technical and Academic Writing Online and Onsite:

A Writing Pedagogy Sourcebook

By

Sarbani Sen Vengadasalam

Cambridge Scholars
Publishing

Teaching Business, Technical and Academic Writing Online and Onsite:
A Writing Pedagogy Sourcebook

By Sarbani Sen Vengadasalam

This book first published 2021

Cambridge Scholars Publishing

Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK

To my daughter
Puja Vengadasalam
Who lights up my days

To my husband
Pannir Vengadasalam
Who supports me in every possible way

To my brother
Subhas Sen
Who inspires me to better my best

And to my parents
Jagadindra Nath Sen and Chandana Sen
Who taught me that working hard is the way to being
good and great.

TABLE OF CONTENTS

PREFACE

From one writing teacher to another, this book offers pedagogical insights and instructional tools for the three key aspects of facilitating a class successfully: instructional design, participation management, and multimedia use. When instructors focus synergistically on the three aspects of class facilitation to plan, engage, and manage their classes, the courses—whether taught in face to face, blended, or online formats—become holistic learning experiences for students.

All courses begin with planning. Section One of the book titled "Pedagogics, Instructional Principles, and Syllabus Design" discusses various theoretical scaffoldings and distinguishing frameworks that underpin how writing instructors devise instructional activities. Even though the syllabus always carries the institutional and departmental stamp in its course objective, grading policy, and delivery system, so much so that the individual teacher has little say in the global framework, s/he *can* bring his or her unique signature and teaching philosophy into the local on-the-ground instruction of the course. Since it is through weekly activities, instructional methods, and actionable assignments that course objectives are achieved, the way each writing teacher envisages and plans out the course matters.

Teaching project writing in scientific and technical writing classes or in professional and business writing courses can be confounding because they need to be both real-world and academic exercises. Chapter One, titled "Superimposing R.E.A.L. Principles on the Project Writing Pyramid: A Paradigm Shift in Teaching Professional Writing," discusses how professional writing classes, which were set up to prepare students for on-the-job writing, can better accomplish their goal. To get consistent outputs from classes that require the writing of project proposals or reports, writing teachers may want to interpose R.E.A.L. principles onto the *Find-Test-Deliver* pedagogical triangle that represents the three phases of their project writing courses. When any of the R.E.A.L principles, where R stands for *Reader oriented*, E for *Extensively researched*, A for *Actionable solution*, and L for *Looped composition*, are ignored or improperly transposed on the project writing pyramid, the writing output suffers and is neither workplace oriented nor academically satisfying. The chapter offers insights into the rationale behind the principles and proffers suggestions on how instructors

could incorporate them into their teaching. Evolving out of a presentation at the University of Maryland University College's Sharefair, the chapter was first published in *International Journal of Curriculum and Instruction*, Volume 12, Number 2 in 2020.

Academic writing teachers, too, face pedagogical challenges while instructing academic writing courses at undergraduate or graduate levels. Chapter Two, titled "Transformative Pedagogy and Student Voice: Using S.E.A. Principles in Teaching Academic Writing," describes how transformative pedagogy can be a way out since its implementation leads to the development of distinct student voices. Whether the course is taught at the undergraduate level through readings, research, and argumentative writing tasks, or at the graduate level through literature review, synthesis, and academic treatise writing assignments, teachers will find the article useful in their mission of helping students grow voices and make contributions to knowledge. The chapter expands on how principles of Scaffolding, Empowerment, and Awareness lead to the development of student expression, and usher in transformation for all stakeholders in the academic writing classroom. Growing out of a New Jersey College English Association conference presentation, the chapter was first published in the *Journal of Effective Teaching in Higher Education* in its Fall 2020 issue.

There is an urgent need to teach and popularize 'Writing for Publications' classes at the graduate and doctoral levels. While acknowledging that the debate about who should instruct such classes continues, the paper proffers methods and practices that writing instructors could use to teach such a demanding course. Chapter Three highlights how the course could encourage scholar-participants to opt for modeling as a way to familiarize themselves with disciplinary and journal conventions. Since peer reviews are central to the publication process, the chapter especially expands on the way online peer review workshops could be conducted at milestone points in the semester to elevate and formalize the peer review process. A sample syllabus, with week-by-week activity break-up, is offered. Developing out of a GlobETS conference presentation, the chapter titled "Publish or Perish!: Sharing Best practices for a Writing Instructor Led 'Writing for Publications' Course," was first published in the *Journal of Critical Studies in Language and Literature* in July 2020.

The teacher, whether s/he is teaching onsite, online, or in a blended format, needs to use discussion spaces for instructional purposes as well as for encouraging participatory learning. Keeping students engaged and driven by using multimedia materials, as well as training them to present complex material through visuals, is the need of the hour. Section Two touches on these important areas, and is titled "Facilitating Online

Discussions, Incorporating Digital Multimedia Assets, and Using Visual Tools." It offers detailed knowhow and information on guiding online participation for writing teachers in general and online teachers in particular. It also discusses how digital multimedia assets, such as open educational resources, which are changing the face of education, may be used in the classroom. In addition, it highlights new methods and best practices in creating and using visuals, such as infographics.

Moving class discussions up Bloom's taxonomy scale is an index of a teacher's success in steering them in ways that realize the cognitive goals s/he set up for the course. Since the discussion area on a learning management system is the space where class interaction and the teaching and learning happens, Chapter Four offers tools and methods to instructors to assess discussions and information flow, not only from teacher to student, but also between student and student, and from student to teacher. The creation of threads and trees as visible and measurable indicators is discussed, even as rubrics are offered for use in the chapter. Screenshots from learning management systems used in classes at various American universities are utilized to demonstrate the use of the discussion pedagogy outlined in the article. The chapter builds off a Rutgers Online Learning conference presentation titled "Of Threads and Trees: How Less is too Less?" and was first published in *Writing and Pedagogy*, Volume 5, Issue 2, 2014, under the title "A Learner Centered Pedagogy to Facilitate and Grade Online Discussions in Writing Courses."

Chapter Five discusses open educational resource repositories, the need for curation, and the challenges facing the open educational resources movement. Best practices and outlines of a possible open educational resources taxonomy and open educational resources pedagogy are described. After offering a checklist/ rubric to help educators decide on the kind of open educational resource to choose, the chapter describes three ways of interfacing with open educational resources in writing classes in general, and business and technical writing classes in particular. The paper reviews findings before concluding that the future belongs to open educational resources for their value as multimedia assets. The chapter grew out of a presentation at the New Jersey Writers Association conference, and was first published in the Fall 2020-Winter 2021 issue of the *International Journal of Open Educational Resources* with the title: "Moving towards an Open Educational Resources (O.E.R.) Pedagogy: Presenting Three Ways of Using O.E.R. in the Professional Writing Classroom."

Chapter Six, titled "Infographics in Academic & Professional Writing," focusses on the need to use infographics in academic teaching and project writing. The special requirements of teaching to the new generation

of students are discussed, and the reasons why it has become necessary for teachers to use infographics to enhance their teaching and classroom interaction are detailed. Why teachers of academic, business, and technical writing classes need to encourage students to use infographics, which are combinations of texts and images, data visualizations and illustrations, brought together effectively by the creators' controlling visions, is pointed out. Evolving out of a North Eastern Group symposium presentation, the chapter proffers practitioner details on infographic tools, possible assignments, and best practices. An earlier version of the article was published under the title "The Why and How of the Infographic Wow: Infographics in Teaching and Writing: Best Practices" in the *DeVry University Journal of Scholarly Research* Volume 4, Issue 2, Winter 2018.

Every article has grown out of this author's diverse and variegated teaching and corporate experiences spread over twenty five plus years. As an undergraduate and graduate teacher who has taught successfully in online, onsite, and hybrid formats in over a dozen global institutions, this writer has written each article with a practitioner focus. Since the author has been a full time faculty, content expert, and visiting professor of academic, business and technical writing as well as worked as Marketing Director and Technical communicator at premier corporate houses such as the INFINITEE group worldwide, the book contains ideas that can help the writing teacher connect the classroom to the work world. Again, every stratagem discussed in this handy sourcebook has been tried and tested while teaching in online, onsite, and hybrid formats at nearly a dozen leading American institutions including Rutgers, The State University of New Jersey, and the University of Minnesota. Hence, writing teachers in general and the underserved online writing teachers in particular will find strategies in this handbook that will help them engage and connect to students better as well as make their classes stand out. In the post-COVID context that has forced writing instructors to explore online and blended teaching that are now poised to become the norm rather than the exception, this pedagogic sourcebook with its collection of best practices is likely to prove especially useful for teachers trying to excel in remote as well as hybrid teaching. After all, each best practice in this book is being shared from one writing teacher to another with one central objective: *to empower fellow teachers to empower students to excel both in academia and the workplace*.

For comments, speaking, and review requests, please contact the author at sarbani.dr@gmail.com.

INTRODUCTION

WILLIAM MAGRINO PH.D.

William Magrino is an Associate Teaching Professor in the Writing Program at Rutgers, The State University of New Jersey. He is also the lead author of *Scientific and Technical Writing: From Problem to Proposal* and *Business and Professional Writing: From Problem to Proposal,* now in their fourth editions. Dr. Magrino is the longest standing faculty director of the Business & Technical Writing division at Rutgers University, having headed the advanced specialized program from September, 2007 through January, 2020.

As someone who has worked in the writing classroom for the better part of the last three decades, Sarbani Sen Vengadasalam has composed an insightful and vital text for anyone interested in the direction of professional writing pedagogy in the 21st century. Whether you have been a life-long innovator in the teaching of the discourses and genres of workplace communication, a fledgling academic trying to break into the field, or a member of the business or technical professional worlds with a desire to share your wealth of knowledge with a new generation of future professionals, in the traditional classroom setting or online, this guide will be of imminent value.

Over the past ten to fifteen years, the changing landscape of the American academy, in accord with the proliferation of shared computing and new media, has necessitated a reevaluation of the traditional classroom space. Online instruction, once an 'experiment' among a select number of graduate programs and members of the for-profit educational arena, has become commonplace at all levels of higher education as we enter the second decade of the 21st century. Now that we have been able to take into account the 'digital divide' between access and exclusion, once prevalent among our populations, more students from diverse educational, socioeconomic, and geographic backgrounds have had the opportunity to take advantage of the added flexibility of distance learning, along with its wealth of resources. However, as with any new educational technologies, especially those that seem to offer so much potential and promise, administrators and instructors

are frequently quick to attempt to adopt these tools and apply the related methods, without conducting the appropriate research in light of the needs of their students, their colleagues, and the purported mission of their respective institutions. This is where Dr. Sen Vengadasalam's practiced approach offers insight to anyone interested in expanding the boundaries of their learning spaces, for online, hybrid, or blended approaches, or as merely a complement to the current limitations of their traditional classroom environment.

The need to reconsider the parameters of the classroom, while taking advantage of relevant emerging technologies in a carefully considered way, has been a principal concern in the professional writing academic fields, in which we desire to train students to develop documents and projects in the ways they will be expected to produce these deliverables once they enter the world of work. In this way, Dr. Sen Vengadasalam's 'real-world' approach to online teaching dovetails with the philosophy I have advocated for the past ten years. Communicating, collaborating, and producing text and images within the virtual classroom in the same way as they will complete these tasks in their future workspaces, are among the most important skills we can impart to our professional writing students.

Honing her knowledge after twenty-five years of teaching professional writing around the world, both physically and virtually, Dr. Sen Vengadasalam offers us a unique view into the practices of the 21st century higher education classroom facilitator. Not only is Dr. Sen Vengadasalam acutely aware of the current state of instruction of our professional writing population, at both undergraduate and graduate levels, she has been at the forefront of its evolution, and will assist us in leading our students and colleagues into its inevitable next stage. An expert in all styles of instruction—from face-to-face, to hybrid, to blended, and with native speakers, as well as non-native speakers of English—Dr. Sen Vengadasalam is uniquely qualified for this task. I can attest to Dr. Sen Vengadasalam's expertise, professionalism, and teaching excellence. She has been one of the leaders and most innovative members at our Business & Technical Writing division of the Rutgers Writing Program, and you will quickly identify that many of the principles, observations, and techniques in this book are derived directly from the fine work she produces in our program.

In Part One of this text, titled, "Pedagogics, Instructional Principles, and Syllabus Design," Dr. Sen Vengadasalam offers us an insight into the primary tension faced by all teachers of professional writing–the need to foster real-world veracity–while at the same time, refusing to compromise a given assignment's academic credibility. On one hand, in our classrooms, we all aim for our students to experience the demands of professional

writing and practice the discourses we want them to master, while composing authentic and viable documents that would fulfill, and even exceed, the expectations of a given workplace. At the same time, in our colleges and universities, there is always the more immediate demand that the work of our students fulfills the academic requirements which we all agreed on when deciding to teach, develop, or take a given course. I specifically encounter the need to strike this balance in my research proposal writing classes, especially with students who are currently members of the professional arenas. In response to this tension between the 'real' and the 'academic,' Dr. Sen Vengadasalam offers us the R.E.A.L. principles of project-based writing courses. Here, R.E.A.L. refers to R for *Reader Oriented*, E for *Extensively Researched*, A represents *Actionable solution*, and L is for *Looped Composition*. In her assessment, Dr. Sen Vengadasalam makes a strong case for this approach in light of the writing and communication skills expected by prospective employers in the existing, and emerging, 21st century workplace.

In the section on "Facilitating Online Discussions," Dr. Sen Vengadasalam advances the use of electronic media regardless of class design. As I exhort, "In the 21st century, if you want to teach professional writing in the way that will benefit your students to the greatest extent possible, even the traditional brick-and-mortar classroom needs to be presented in a hybrid format." As Dr. Sen Vengadasalam illustrates, today's ingenuity in terms of classroom design and delivery is rooted in the integration of new media in original and thoughtful ways. Here, appealing to both the innovator and the traditionalist, Dr. Sen Vengadasalam dutifully points to effective uses of the discussion tools of any learning management system (L.M.S.), while explaining how they could help our students climb the levels of Bloom's taxonomy. Even the most cautious of classroom educators will find a significant amount of practical value in Dr. Sen Vengadasalam's techniques and resources.

Part Two of this original and timely volume, "Incorporating Digital Multimedia Assets & Using Visual Tools," looks ahead to the rapid proliferation of Open Educational Resources. Here, Dr. Sen Vengadasalam identifies the current state of O.E.R.s, how they have changed higher education, and their potential for the future. Evaluating these resources through the lens of the 'Six P's' of proposal writing, from my work at the Rutgers Writing Program, one can see how an assiduous instructor should be able to evaluate, integrate, and curate O.E.R.s based on the criteria of an individual assignment, while simultaneously enhancing their students' engagement with a larger world.

I truly hope you find Dr. Sarbani Sen Vengadasalam's book as relevant, astute, and practical as I did. Rooted in the traditions and discourses of professional writing instruction, while remaining open to the opportunities for the future, this text directs us toward new and, at times, necessarily, winding, pedagogical avenues in our rapidly evolving academic and electronic landscapes. As someone constantly looking for ways to enhance my students' experience in becoming proficient in professional writing, as well as increasing their chances for employment based upon mastery of these skills, I am certain that this text will remain one of my most valuable resources for years to come.

PART ONE:

PEDAGOGICS, INSTRUCTIONAL PRINCIPLES, AND SYLLABUS DESIGN

CHAPTER ONE

SUPERIMPOSING R.E.A.L. PRINCIPLES ON THE PROJECT WRITING PYRAMID: A PARADIGM SHIFT IN TEACHING PROFESSIONAL WRITING

Abstract

Institutions of higher education introduced professional writing classes as a way of preparing students for on-the-job writing. To better accomplish the goal, as well as to get a more consistent output from these classes that require the writing of a project proposal or report, writing teachers may want to incorporate R.E.A.L. principles onto the *Find-Test-Deliver* pedagogical triangle that marks the three phases of their project writing courses. When R.E.A.L principles, where R stands for *Reader oriented*, E for *Extensively researched*, A for *Actionable solution*, and L for *Looped composition,* are used, the writing output becomes both academically sound and workplace appropriate. The article delves into the rationale behind the principles and proffers suggestions on how teachers could incorporate them into their teaching. It concludes that such an approach is a paradigm shift in professional writing instruction. The chapter was first published with the same title in the *International Journal of Curriculum and Instruction*, Volume 12, Number 2 in 2020.

1.1 Introduction

Colleges and universities began to offer professional writing classes as a way of preparing students to write in the real world. Though they go by different appellations, these undergraduate courses can be

grouped into two buckets: technical and business writing classes. While technical writing courses offer exposure and training in preparing technical proposals, user manuals, and scientific papers to students majoring in the sciences; business writing classes give students majoring in business, social sciences, and the humanities opportunities to gain expertise in writing official memos and letters, resumés and feasibility studies, proposals and reports. While these Writing Across the Curriculum (W.A.C.) courses include assignments on different forms of technical and business writing, with varying weight, they all feature a proposal or report writing assignment that requires students to write about how the implementation of their research-backed plans solves real-world problems.

To contend that college graduates can learn to do this realistically, with only on-the-job training, is to assume that universities can play no role in, or have no understanding of, the broad contexts of activity their graduates are bound for. Since business and technical writing classes are specialized Writing Across the Curriculum (W.A.C.) courses, their development not only reflects revisions of local assumptions about the place of writing in and across the curriculum in higher education, but also highlights the evolving realization that academic institutions need to cater to corporate developments and workplace requirements. What W.A.C. professional writing courses need to do is to be very explicit about connections between real world needs, real world information, and real world skills to be learned. In this context, it becomes necessary to find how far that has happened, and probe into principles that can help instructors to help their students acquire mastery in business and technical discourses, while reifying the social relations and expectations of which those discourses are a part.

This paper focuses on the project writing component of W.A.C. professional writing courses, and offers fellow instructors a teaching methodology based on R.E.A.L. principles that can be superimposed on the three vertices or phases of the find, test, and deliver apices of the project writing pyramid. The paper discusses how such project writing instruction is different from product-based professional writing, and may be successfully taught in online and hybrid courses, as much as in onsite modes of instruction. The paper finally concludes that the paradigm shift in project writing instruction that R.E.A.L. introduces leads to students successfully receiving training in college in the kind of on-the-job writing they will need to do when they join the workforce.

1.2 The Employers Weigh In: The Problem

Business and technical writing programs were set up to prepare students for the workplace. However, as far back as 1982, Faigley and Miller's surveys of employers in businesses and industry found that the required composition courses and elective courses in business and technical writing were not producing competent writers, with 78% of the upper-level managers in business and industry commenting that the writing done by new graduates on the job was poor. The finding was backed up by Bizell (1982), who pointed out that a wide gulf had crept in between what colleges were delivering and what industries expected their students to know.

> We want our students to succeed in the dominant culture. The theoretical question suggested by this conflict–and it is especially urgent for researchers and teachers of professional and non-academic writing–is the relation of discourse to social practice…I am not condemning research and teaching in professional writing; rather, I am making the claim that this research and pedagogical practice do not go far enough. If we recognize and explore the challenge presented by the relationship between discourse, teaching, and social reproduction, we may be able to discover ways to intervene…This would, of course, require that we expand our research goals and significantly alter our teaching. (p. 7)

The alteration did not happen, and the gulf continued to grow, prompting Herndl (1993) to warn that current pedagogical practices were producing "students who are not aware of the ideological development of discourse and who do not understand the cultural consequences of a dominant discourse or the alternate understandings it excludes" (p. 349). To bridge the chasm and to ensure greater levels of "job readiness among graduates" (p. 11), Lee Harvey (2000) called for renovations of higher education curricula. There was not only an evolving perception that a new methodology was required, but also the realization that it is necessary to listen more keenly to the feedback from, and be more sensitive to, the requirements of the workplace.

To many, a college education is as good as the way it prepares students for their careers and their professional roles. As industries increasingly monitor how effectively universities are fulfilling their roles, they find that institutions of higher education are not able to endow students with satisfactory communication, especially writing skills. A McKinsey & Co.-sponsored survey (2012) found that less than half of employers believe that new graduates "are adequately prepared for entry-level positions" (Mourshed et al., 18). In contrast, 72% of educational providers consider their graduates to be work-ready. Given the difference in the perceptions,

the authors affirmed that the two sectors seem to "live in parallel universes" (Ibid.). The report's summary of recommendations noted the desire of businesses to see greater alignment between university curricula and the needs of industry, and a greater emphasis placed on the development of specific employability skills such as communication skills in university programs (p. 209). Jackson (2013) took the point further when she highlighted that "there is a need for role and attitudinal changes to the assumption of transfer" as well as to perceptions that workplace skills can only be acquired in "workplace settings" (p. 776). The absence of these changes not only holds graduates back from gaining satisfactory employment, but, as Moore & Morton (2017) point out, it also has an inhibiting effect on the performance of employing organizations, and ultimately the broader economy (p. 591). Hence, the 2018 National Association of Colleges and Employers survey went so far as to say that, "when it comes to the types of skills and knowledge that employers feel are most important to workplace success, the large majority does NOT feel that recent college graduates are well prepared" (Bauer-Wolf). The AAC&U report (2018) goes on to add, "This is particularly the case for applying knowledge and skills in real-world settings, critical thinking skills, and written and oral communication skills–areas in which fewer than three in ten employers think that recent college graduates are well prepared" (Ibid.). The emergent consensus is that college students need to develop proficiency in various workplace document types for them to be successful.

Since professional writing programs had taken up the task to prepare students for workplace writing, a best-practice approach was one that required all prescribed assignments to be written in the format of business documents. As Hancock et al. (2008) put it:

> The most common feature of workplace writing was the need for brevity and concision. A related area was the need to avoid the frequent use of academic and technical language in one's writing. It was pointed out that in the professions, the recipient of any written communication–both within an organization and outside–will typically not share the same technical background & expertise as the writer, so there is a need to constantly monitor and adjust one's language…[A]nother parameter was the action-oriented nature of writing in the professions, such that all messages are somehow concerned with prescribing or responding to some form of action…, hence an important written communication 'skill' that needs to be developed in students is the ability to recognize the specific circumstances and constraints that shape any writing episode (purpose, audience, etc.), and to be able to 'adapt' their writing to suit such contexts. (p. 11)

While it is clear as to what the goal of the new kind of professional writing instruction is, the change, even if necessary, brings several pedagogical challenges that need to be both explored and overcome.

1.3 Pedagogical Challenges: The Background

That professional writing classes have to train students to write to audiences both inside and outside the office has various implications for professional writing teachers. Signposting and structuring become very important since, as Faigley and Miller (1982) rightly point out, lack of clarity and poor organization of messages in the workplace lead to wasted time, misunderstandings, and poor public relations (p. 564-69). As per Price (1985), business and technical writing instructors need to accept the following:

> 1) teachers have an obligation to make sure their students leave professional writing classes with the writing skills and composing strategies they will need after graduation, and 2) teachers must design courses that expose students to the various forms they will use and to the rhetorical considerations they will encounter in on-the-job writing. (p. 3)

Composing strategies (such as signposting), which need to be taught, are direct outputs of audience centeredness. Unlike academic writing classes, the instructor—a member of the academic community—is not the audience. Instead, s/he and the student writer are working together to compose messages and produce writing for corporate and workplace use. It can be pedagogically challenging for both the instructor and the writer to remember to be conscious of the external audience. The need to teach students to be audience centered, where the audience comprises of institutional decision-makers, cannot be overemphasized. As professional, or on-the-job writing is conscious of organizational objectives and targets, it is always cognizant and clear about what it wants the audience (the reader) to do. Since it wishes its reader to give an order, reply with a clarification, connect to someone, and so on, workplace writing needs to be more audience-oriented and reader-friendly than academic writing. Since workplace writing caters to, and seeks to persuade its audience to take action, teachers need to work on the development of a persuasive skillset and acute audience consciousness in their students. To present and teach this to professional writing students is important, even if it entails teachers taking up the challenge of having to put themselves in the shoes of their students' intended audience.

Several discourse studies have focused on the types of contrasts noted between written communication in academic writing and professional writing domains. As Lannon and Gurak (2013) point out, "Proposals attempt to persuade an audience to take some form of action: to authorize a project, accept a service or product, or support a specific plan for solving a problem or improving a situation" (p. 582). The persuasion has to be done through targeted research that involves the ability to perform investigations into theoretical domains, case studies, and best practices. Student writers, consequently, need to be guided through, and develop, expertise at research methods that not only include academic writing research into library academic databases, but also interviews, surveys and other modes of primary research. The challenge of professional writing curriculum design, therefore, is to evolve one that bridges domains of academia and industry as well as theory and application. What is needed in our professional writing courses is not just instruction in the writing of specific workplace genres, such as emails, letters, memos, instructions, white papers, proposals, reports, and so on, but also exposure to a range of experiences and tasks that will help student writers learn how to shape their acquired knowledge and expressive discourse in distinctive and communicatively appropriate ways. Hence, the assignment of writing a real-world proposal or a report offers exposure and opportunities to be trained in multiple communication tasks which prepare students for their workplace writing very well. However, the challenge is to evolve and break up the assignments into looped deliverables that do not overwhelm learners.

Proposal or report writing, henceforth referred to as project writing, is often a significant part of a larger course in technical and professional communication. Research on course design finds that there are not many courses solely dedicated to teaching this important area of technical and professional communication, and they almost always include other forms of professional writing. As the differences between technical writing and business writing courses are often arbitrary, and are always accompanied by assignments that involve the drafting of a letter or a memo, a resumé or a manual, a technical description or a white paper. As dissertation researcher, Price (1985) puts it, both classes could feature "a memo to a subordinate, a letter to an irate customer, instructions to a consumer on how to assemble a bicycle, or a written advertisement for a computer," and be classified as professional writing practice (p. 1). If a technical writing course often includes the writing of a technical guide or a user manual, a product description or a technical paper aimed at informing readers, so they can understand the parts, operate a device, know a product, or understand an issue; business writing classes require students to write website comparisons,

social media analyses, or position papers that require them to learn how to evolve parameters, understand content & design principles, and take stands. Even if courses differ across universities in the number of assignments and student deliverables, they all feature a project writing component that is the focus of this article. While there is a consensus that all courses have a project writing component, there is little agreement on whether these projects are to be simulations or implementable solutions, or on how these projects are to be taught and graded. Moreover, the trend is to teach project writing in a vacuum because it is pedagogically easier to do so. This can be self-defeating, because the outputs students produce cease being like on-the-job writing, and the importance of customizing writing to an evolving situation stops being a course objective. Realism definitely needs to be reinstated into the proposal writing pedagogy if the courses are to fulfil their mission of being academically sound while teaching students to write in ways that are relevant to, and required in, the workplace.

Even though realistic project writing is so necessary, analyses of course syllabi and assignments reveal a need to redress the limited spaces in which project writing is being taught today. A scrutiny of business and technical writing textbooks, as undertaken by Lawrence et al. (2019), reveals the need for texts and courses to fully explore proposal writing through active and practical experiences, so it can achieve the following:

1. Textbooks offer rhetorical advice about proposals, describing them as persuasive documents that must be attentive to the audience and the needs the proposal is meant to address.
2. Textbooks offer practical advice about proposals, which emphasize the multiple modes of communication required in a proposal, as well as the basics of proposal components and the proposal process (identifying, reading, and responding to a solicitation, modulating texts and projects to an audience, and producing ethical, impactful results or changes). (p. 36)

While course texts need to discuss how proposals function across various spaces ranging from basic requests for institutional or workplace policy changes to generation of business and sales development tools, what the teaching needs to emphasize is how the proposals' complexity, range of purposes, and audiences, impact the writing. Encouraging students to write about campus-wide or township improvement initiatives may be effective ways to teach the rhetoric of proposal writing in terms of its persuasive functions, while incorporating realism and real world factors into the writing project.

If the teaching of technical and professional discourse is to be successful, the classes need to build abilities of students to persuade readers to take purposive rational action and resolve institutional and organizational problems. As Lawrence et al. put it (2019), "Instead of a form-based conceptualization, proposal writing instruction and research must emphasize the differences in the rhetorical situations in which proposals are written in order to equip student writers and researchers with a wide set of rhetorical tools for analyzing and understanding the writer's role, audience, resources, limitations, and intended proposal action, in the development of a proposal" (p. 44). The proposal writing assignment in an undergraduate course replicates the rhetoric of proposals in corporate environments when it offers an opportunity for students to evolve and practice the skills they will be called upon to use in developing on-the-job writing proposals and workplace reports in the future. To help enhance proposal instruction and to bring in synchronization with how project writing operates in the workplace, it may be worthwhile to explore the methodology of superimposing the principles of *Reader orientedness*, *Extensive research*, *Actionable solution*, and *Looped composition* on the three aspects or vertices of the proposal writing pyramid: search, test, and deliver. This superimposition may be the way to bridge the gulf between proposal/ report pedagogy and real world proposal/ report writing practices.

1.4 Methodology: The Project Writing Pyramid: Search-Test-Deliver

Business and technical writing are taught in face-to-face, hybrid, and online formats. Irrespective of the mode of delivery, instructors may want to center their teaching, not on telling students what to do for their current projects, but on developing a skillset that will help them write project documents in the future. All projects and project writing broadly follow the three phases of 'find,' 'test,' and 'deliver.' If the writing task is envisaged as a triangle with three vertices, it begins with a search, climbs up to testing, and devolves into composing a plan that is delivered and presented in proposal, report, or presentation formats.

In the real world, the project writing process begins with 'Request For Proposals,' or R.F.P.s. Hence, the student's writing task begins with the search for a project to write out a proposal or report for. The question to spark off the search is this: What is the key problem that my project proposal needs to find a solution to write about? When students search for possible topics, they *find* one that is in line with their professional interests, career goals, and disciplinary knowledge. At the beginning of the semester, the

answer to their question is indeterminate. As students search, investigate, and probe into disciplinary matrices, case studies, and best practices, their research converges towards what could be a solution. As their research coalesces, the question around the midpoint of the assignment sequence becomes: Are the solutions I am recommending and the plan I am evolving from my research feasible? In order to be able to answer that question, students need to be tutored in *testing* procedures or feasibility investigations, such as surveys, interviews, and other instruments of primary research. When the feasibility testing is completed, the *delivery* stage sets in. In this phase, student writers offer their research and their feasibility results, their recommendations and their action plans in written format as well as in presentations. In this stage, students practice conceptualizing, organizing, and structuring their data in a real-world environment such that it answers the question in the audience's mind: What is the guarantee that the solution will work?

Even when the class is taught remotely, all business and technical writing classes feature a formal presentation component using synchronous tools like Skype, Zoom, and WebEx or asynchronous tools like VoiceThread, Voice enabled PowerPoint, and Screencast, so students learn how to present their projects using technology. Project presentations, like project documents, must have an official tone and take place in a formal setting. Each student practices his or her persuasive skills in presentations where each attempts to convince the class (who stand in for the real-world audience) that their data and their recommendations are sound. Facilitating presentations sessions, which are followed up with question and answer exchanges that are either live or recorded, become occasions to proffer suggestions to presenters, and are valuable opportunities for students to prepare for their future role as workplace presenters.

Even if the pedagogical pyramid, with its vertices of search, test, and deliver, is useful in course planning, teachers need to be offered strategies to use in the three phases. In Ballantine's (2010) words, "Public works require public words…The best way is to offer an open and flexible professional and technical writing curriculum" (p. 236). Each aspect of the pedagogical pyramid presents instructors with unique challenges and may require instructors to create a subset of assignments that leads to the final project document. As the student writers needs a lot of handholding before they reach the final delivery stage, business and technical writing textbook writers and teachers may need to create mini-lessons and lead up assignments in the 'find,' 'test,' and 'delivery' stages. Again, workshops and instructional aids may be required to help students through the cycles

of drafting, reviewing, and revising, before the project documents can actually be delivered to the patron.

Given the onerous responsibility on them, instructors may require a pedagogical set of principles to help them in their teaching of workplace writing. Integrating R.E.A.L. principles onto the 'find,' 'test,' and 'deliver' vertices of the pedagogical triangle, which mark the three phases of their project writing courses, is empowering for the teacher as well as a way to get consistent and workplace-appropriate project writing assignments. To advance the purposes of the class and the needs of the students, the teaching pedagogy and syllabus may need to incorporate R.E.A.L. principles where R stands for *Reader oriented*, E for *Extensively researched*, A for *Actionable solution* and L for *Looped composition*.

Before going into the details of the method and offering some practitioner tools for incorporating each principle into the teaching methodology, it may be necessary to explore how these principles map to the 'find,' 'test,' 'deliver,' instructional pyramid. *R* or *Reader orientation* is the first principle of R.E.A.L. that project writing and project writers are likely to find helpful. Being conscious of the needs of the audience, or *reader orientedness*, is what makes or breaks on-the-job writing. Being mindful, knowledgeable, and aware of the audience—whether it is an institutional entity or a corporate/ technical reader—not only influences the way students conduct their upcoming research, but also impacts the tone and techniques they choose while writing, and their ability to successfully persuade their audiences. If in the 'find' stage, students zero in on a problem in their workplace or institutions, or in their schools or communities, they embark on the search for a solution in the stage that follows. Examining theoretical frameworks and illustrative case studies helps writers to identify ways and means to both scaffold and *test* their solutions This is what the second postulate or the E for *Extensive research* principle is all about. Students need to be guided to *find* a problem in their disciplines or their communities, as also when they attempt to *test* the feasibility of their solutions through library explorations, market research, and survey projections. The *Extensive Research* principle maps onto both the 'find' and 'test' vertices of the triangle, as they offer writers a validation opportunity for their proposed plan. As students move on to the *deliver*y stage, the *Extensive Research* principle needs to work in tandem with the *Actionable solution* postulate, since the critical differentiating principle between academic writing and project writing outputs is that students write in the latter about how an actionable solution was, or can be, implemented. Writing teachers not only need to instruct students about how to cite their research, but also teach them how to validate their proposed solution

through local level fieldwork. The fourth principle of *Looped composition* guides students in arguing for the workability and actionability of their proposals. The need to bring in opportunities for constructive critiques and peer feedback in conferences and workshops in the 'delivery' stage cannot be over-emphasized. Put differently, the looped composition principle is necessary in all phases, but particularly impacts the 'deliver' phase of project writing instruction when the project documents are being made ready for the patron or audience. Going through multiple drafting rounds, review workshops, feedback cycles, and presentation sessions, makes it possible for student writers to come up with detailed, well-supported, actionable plans in presentation, proposal, or report format.

While it is easy to see how R.E.A.L. principles coalesce into each other and impact every phase of project writing instruction, it is necessary to explore the method by which the four principles may be introduced and integrated into professional writing instruction in more detail.

1.4.1 R.E.A.L.: R for Reader Oriented

At the cost of being repetitive, it must be emphasized that professional writing is *reader-oriented*. Put differently, professional writing is writing with a 'you' attitude that focuses on reader benefits. As project-writing teachers need to find opportunities to make students aware of different writing tones and the need to write differently for different audiences and for different purposes, a suggested mini-assignment is an audience analysis summary. A P.A.T. (Purpose-Audience-Technique) brainstorming lesson, followed by an audience analysis micro-assignment, can be helpful, since students study their audiences against their purpose with the intent to understand what kind of an argument would be most effective for them. As students explore what the best Technique could be, given their Purpose or objective in their project writing, an analysis of the Audience's needs helps them to not only develop *reader orientedness* but also arrive at a successful methodology for argumentation. Appealing to the need to surpass competition might work with one audience, while return on investment, adding brand value, or being compliant with laws and regulations might work with others. Introducing audience awareness during their 'find' process leads to students adopting and adapting their styles and content to audience tastes, requirements, and situations.

Just as creating a new drill user manual for a novice requires more explanations in contrast to composing one for a drill press operator in a maintenance shop, project writers, too, need to learn to write in different styles for the different audiences they deal with while they work on their

project documents. In the 'test' phase, students draw up interview questions for the decision maker, who is a company or institutional head, and create a survey form for deploying to the targeted population or intended product/ service users. Instructors get several teaching opportunities and moments to introduce a primary research mini-lesson that expands on how *reader orientation* and audience analysis are required to come up with successful surveying and interview questionnaires.

     Reader orientedness comes into play in the 'delivery' phase too. When teachers of both technical and business writing make students aware that the best writing style for a given occasion is the one that improves clarity and removes obstacles to the audience's understanding, students make conscious writing choices and evolve signposting and visual strategies in their project writing and analytical presentations. As Flower and Hayes (1981) point out, "A cognitive process explanation of discovery" and "ability to decenter from his own reality to consider the needs of a reader" are the hallmarks of all successful professional writers (p. 386). All on-the-job writers understand that writing is essentially another way of managing behavior, and hence, writer-managers always focus on reader actions and benefits when they write. In keeping with this, instructors may want to encourage students to highlight the W.I.F.M. (or What is In It For Me) in their project documents. By having student writers emphasize audience takeaways in every section of their project documents, including case studies analyses, teachers facilitate the creation of clear, unified, and uncluttered messages in students' project work. When instructors integrate *reader orientation* in assignment instruction and rubric evaluations, students learn to deploy a reader-benefit heuristic that will come in handy in their future roles as workplace writers.

1.4.2 R.E.A.L.: E for Extensively Researched

     Professional writing is persuasive writing. Much of the writing for business and industry has a predominantly persuasive tone because the goal is to argue for a particular service, solution, or product, that they have evolved after audience analysis and feasibility testing. As Price (1985) puts it, writers are seeking cooperation from the reader, either in the form of a financial agreement or a social contract that will allow the reader and writer to reach a common goal (p. 68). Given this background, it is clear that vague generalizations and unbacked statements will not work in student project writing either.

     In the 'find' stage, instructors can facilitate library resources demonstrations to show students how to conduct extensive research into

problem and solutions. Introducing evaluation metrics and applications like Goodnotes can help students evaluate their findings and take notes. In the 'test' stage, a mini-lesson on conducting and reporting on primary research, and taking students through tools like Google forms or Microsoft survey, would not only lead to stronger student projects, but would also prepare student writers well for the workplace. In the 'test' stage, instructors may want to teach student writers how to report on the testing of the solution's feasibility with signposts, visuals, and infographics.

Using instructional tools to help students conduct and report on their *extensive research* into marketplace studies or laboratory investigations in the 'find,' 'test,' and 'deliver' stages ensures that students use the right discourse framework or theoretical scaffold to peg their proposed solution/ plans onto. At all points, it becomes important for instructors to remind student writers that they are not writing a research paper but coming up with an *actionable solution*. While student writers do perform *extensive research* to find support and data to support their claims, what cannot be forgotten is that *actionability* is a fundamental characteristic of workplace communication, and must therefore characterize all documents produced by students of professional writing courses. Even though writing a business or technical proposal involves research, the research, even though it is extensive, is *actionable* and, hence, quite different from what goes into an academic research paper.

1.4.3 R.E.A.L.: A for Actionable Solution

A distinguishing trait of professional writing, undoubtedly, is that it features an *actionable solution*. As problem solving is the underlying rhetoric of project writing, it works around the actionability principle that characterizes all on-the-job writing. Also, the *actionable solution* principle impacts all three phases: 'find,' 'test,' and 'deliver.' Exploring the problem from the *actionable* perspective implies that that student writers be encouraged to 'find' or pick a problem that can be solved though concerted action. Similarly feasibility tests and primary research tools explore ways of and reactions to putting the students' proposed solution into action, regardless of whether the solution is a new or improved product, service, or policy. In the 'delivery' phase, the success of the plan that the writer comes up with is directly dependent on the writer's ability to forecast and engage with objections and complications when the solution is actioned or implemented.

The *actionable solution* principle presumes *reader orientation*–it imagines that the student writer has analyzed the readers' situations and

anticipated their reactions. The greatest advantage of the problem-solving approach is that it encourages the student writer to carry out *extensive research* and feasibility testing keeping the reader in mind. This not only metamorphoses the writing output, but also turns the writing into a writer-to-reader act. Targeted finding and *extensive research* strategies may help writers come up with their proposals, but the *actionability* rhetoric helps the writer frame the plan and adapt the information such that it is ready for readers to use. That is why Flower & Hayes (1977) perceived professional writing to be a way for authors to: identify their intentions for the reader-based text they are crafting; develop a plan to achieve that intention; and execute, monitor, and revise that plan (p. 459). Since student writers often have trouble structuring the solution, teachers may want to step in with teaching tools that help students utilize appropriate real world project frameworks to lay their plans on.

Real world projects have phases and timelines. Successful project writing classes thus need to encourage students to create detailed phase-wise action items, and also engage with projected cash inflows and outflows. Estimating time and money requirements are important parameters of the *actionability* scaffolding of workplace projects and should be present in students' submissions too. Unfortunately, as Slomp et al. (2018) put it, "some do not give us detailed budgets that explain how the money will be used; others don't explain very clearly why the project is needed. The most common problem, though, is that they don't provide enough detail about what the writers want to do, why they want to do it, and how they are going to get it done" (p. 88). Procuring and analyzing actual, real-world project writing samples in class can go a long way in helping students and teachers to identify rhetorical strategies and view at first-hand how each plan section has been written. As per dissertation writer Jeansonne (1998), "providing models and samples" is an "effective pedagogical method" (p. 6), and can be very useful for professional writing teachers.

If project proposals are going to incorporate detailed plans that include phases, timelines, expense justifications, and budget explanations, that map to, and are outputs of, the students' research and feasibility testing, class instruction and grading rubrics in professional writing class need to build these in as assignment deliverables. As this is no easy task, and so as not to end up overwhelming students, instructors may want to create detailed class schedules, where the project work is planned, composed, and reviewed in doable sections or chunks, offering models and samples as patterns to help students in their writing task. What this signifies is that instructors are likely to find it helpful to opt for a *looped composition* process.

1.4.4 R.E.A.L.: L for Looped Composition

Professional writing is a process which is not product-based. The term 'process' refers to the stages that a writer goes through recursively while composing, such as invention, drafting, and revision. Even when using samples to model their work, the process rhetoric reverses the situations when students are told what to do, but not how. Whereas practitioners of product-centered instruction tend to center their instruction on qualities typical of the ideal finished product, process pedagogy emphasizes the how-to of writing. Adopting a process approach means that teachers intervene in the students' composing processes and offer instructions and tools to students to write out the project writing sections. As Price (1985) describes it, the process approach:

1. focuses on the process of writing, the 'how to', not the 'what'-the instructor intervenes in the composing process;
2. recognizes and attempts to teach strategies for prewriting, writing, and rewriting;
3. attempts to reduce threat by stressing an environment of cooperation;
4. is informed by rhetorical context, including audience, form, purpose, and subject;
5. is informed by current research and theory;
6. views writing as recursive rather than linear;
7. emphasizes that writing is a way of reconceptualizing material, resulting in learning rather than recording;
8. organizes the modes around purposes instead of forms;
9. does not attempt to reduce writing to rules and forms; and
10. views writing as holistic, intuitive, and non-rational as well as rational. (p. 10-11)

While the 'find' and 'test' phases do incorporate the writing process approach, the *looped* principle of project *composition* comes to the forefront in the 'delivery' phase. When the project goes through multiple drafts and reviews in class as it is made ready for delivery, the *looped* method replicates the way documents go through various departments and supervisors in the workplace.

A well thought out *looped composition* approach takes student writers step-by-step through the proposal/ report writing process. Along with instructional tools that have already been alluded to, scheduling peer review sessions goes a long way in generating high-quality professional project documents. Peer reviews bring the audience into the reckoning, since the students' peers, who stand in for their final audience, examine how well writers have clothed their ideas and research in clear language.

Teachers can not only emphasize deliverables for each peer review workshop so students understand their own writing processes, but can also bring in more efficient and effective means of composing and revising by including W.I.R.M.I., or the 'What I Really Mean Is,' reflection sessions. Vocabulary, tone, and phraseology matter in project writing. If students often use substitute phrases instead of the real phrase, this can render project writing and the writing process ineffective, hence W.I.R.M.I. is a useful strategy to incorporate into peer review sessions.

        As the project writing process is recursive, simultaneous, and individualized, teachers can easily include the *looped composition* principle in their instruction. The fulfillment of the various stages of the project writing process, namely, incubation, articulation, and production, needs to be marked with review workshops that allow the writers, their peers, and the instructor, to review the writing progress and offer written comments. If stage one is prewriting when stimulation, ideation, brainstorming, bundling, verbalizing, and sketching happen, leading to a project charter, the research into the charter moves student writers from project gestation to project articulation. If the first phase or loop ends with a review of the project charter by peers and the instructor, the *extensive research* stage of *looped composition* is signaled by student-writers articulating what information they will relay, and how they will relay it. In the post-incubation stage, student project writers articulate their findings from their primary research and case study exploration into what may be termed as charter execution. As the charter grows into a persuasive argument and becomes the first draft of an execution plan, midterm reviews and midterm conferences may be scheduled to mark the end of the stage. In the production, or post-articulation phase, when the project document is getting ready for delivery, multiple revisions, multiple edits, and multiple evaluations need to take place. The teacher may want to guide the revision process through the creation of detailed peer review forms and the holding of peer review workshops. The revision loop needs to factor in content and structure review, as well as mechanics-checking through editing and proofing. Halpern (1983) suggests six goals for the review processes for the business writing teacher: invention, audience adaptation, clarifying purpose, organization, controlling voice or persona, and polishing (p. 39-53). Similarly, Jeansonne (1996) suggests that the technical writing instructor should teach technical writing as a recursive or linear process, with an emphasis on planning, organizing, writing, and reviewing (p. 85). Just as in the workplace, the delivery stage marks the culmination of the project writing process, and largely takes the forms of project presentation and a project document. The project presentation itself can be a way to receive rigorous instructor feedback and

peer comments on the incorporation of the *actionable solution* principle, since that ensures that the end project document is true to the project charter.

Better class writing is an output of instructors' meticulous class planning. Since on-the-job writers do not complete an entire document in one writing session, it is, therefore, pedagogically appropriate that writing teachers plan the project writing such that it goes through the writing loops just discussed, as the project evolves from finding to testing to delivery. Perhaps the most important upshot of *looped composition orientation* is the students' realization that what is as important as the final document is the process of preparing it.

1.5 Using R.E.A.L. Principles: Results

Using R.E.A.L. rhetorical practices in instruction not only provides students with the training they need to manage and produce competitive proposals in their future work lives, but also results in tighter technical and business professional documents from professional writing classes. What is more, it brings in uniformity in student output, irrespective of how professional writing is taught. As more and more students opt to take professional writing classes in hybrid and online formats, using R.E.A.L. principles for teaching leads to pedagogical consistency across various modes of classroom delivery.

As per the National Center for Education Statistics, 2018, compiled by Ginder et al. (2019), the proportion of all students who were enrolled exclusively online grew to 15.4 percent, up from 14.7 percent in 2016, or about one in six students. The share of all students who mixed online and in-person courses grew slightly faster, to 17.6 percent in 2017 from 16.4 percent in 2016. Again, the proportion of all students who took at least one course online grew to 33.1 percent from 31.1 percent in 2016. Since the digital environment has implications for how communication is created and disseminated, Carradini (2019) posits that, "as more businesses and fields transition to natively digital work, giving students experience with natively digital communication environments will actually help them prepare for future careers" (p. 136). In the context of professional environments being digitized, the fact that more and more business and technical writing courses are being offered online is a welcome development.

As we explore how R.E.A.L principles impact the output of business and technical writing classes, whether they are taught onsite, online, or in hybrid formats, it is important to consider certain findings. As per studies conducted on the question of how 'writing improvement' is understood in the context of Technical and Business Communication classes,

and how the 'writing improvement' achieved in online/ hybrid formats course matches the writing improvement of their counterparts enrolled in a face-to-face version of the same course with the same professor, the move away from the face-to-face format does not seems to impact the perceived 'writing improvement.' Matthew's 2016 doctoral study, using a mix between and within subjects' analysis of variance with repeated measures, found that the hybrid version of the course could be as effective as the face-to-face version in producing improvement in students' writing (p. 72). The findings are a pointer to the fact that equal improvement can be achieved across all formats if the same instruction principles—such as R.E.A.L.—are followed. "My study and several others advance the conversation on the efficacy of hybrid and online courses to a point where it seems reasonable to state that there surely are many hybrid and online courses at universities across the country that produce as much student learning as their face-to-face counterparts" (ibid., p. ii). "Students who want to enroll in hybrid courses for whatever personal preference or lifestyle reasons will be heartened to know that they are not necessarily receiving an inferior education to their counterparts who take courses in the face-to-face format" (ibid., p. 71). The study adds how it is "reassuring for students, who can only access a college education through technology-assisted course formats, or whose lifestyles make technology-assisted courses easier to complete than face-to-face ones, that hybrid courses can in many cases produce learning outcomes comparable to face-to-face courses" (ibid.). What is important is not the form of delivery, but that the same dialectic supports the pedagogy of the professional writing class.

All project writing students have to work independently, and play big roles in facilitating their own learning, making professional writing classes a good fit for modes of teaching that are not face-to-face. Superimposing R.E.A.L. principles on the pedagogical writing pyramid thus ensures that teachers assist in the same ways, and at the same points, of the writing process, such that the kind of learning that happens in an online class equals that which occurs in face-to-face or hybrid courses.

1.6 Discussion: Why is this a Paradigm shift?

The article presented strategies of how instructors of technical and professional writing classes across all formats could use R.E.A.L. principles to help students conceptualize and write out proposals that move away from form-based approaches toward a more productive, rhetorical, process-based method. By electing to go in for project charters and on-the-job proposal writing scenarios, where the tangible, material practice of producing text

has to be compliant with the demands of the audience, as outlined in the Request for Proposals (R.F.P.s), a shift from conventional professional writing instruction was effected. As conceptualization of R.E.A.L. proposals reifies form-based practices associated with proposal writing, the new practices and strategies presented here spark off a paradigm shift in the teaching of proposal writing. As R.E.A.L. principles build on each other to become an informed methodology of instruction, they generate the kind of project writing that is workplace-appropriate. Since proposals, and the funding they mediate, drive many parts of the academic and nonprofit worlds, using R.E.A.L based instruction can help students write successful proposals or reports even before they join the workforce, as competent, capable, and expedient writers. The paradigm shift that superimposing R.E.A.L. principles onto the project writing pyramid ushers in can make professional writing the kind of bridge course that finally connects institutions of higher education to the industry.

1.7 Conclusion: Significance of the Paradigm Shift

This article detailed current problems and practices and discussed both the feedback from, and the expectations that companies have of, employees when it comes to technical and business writing. It discussed problems that professional writing course teachers face while instructing project-writing classes. The paper went over methods and tools through which the principles of R for *reader-oriented*, E for *extensively researched*, A for *actionable solution*, and L for *Looped composition* principles, or the R.E.A.L. approach, can be superimposed on the search-test-deliver phases or vertices of the teaching pyramid. The paper pointed out that when the course is designed and taught with R.E.A.L. principles, students produced *extensively researched*, *reader-oriented,* feasibility-tested, and *actionable* project documents. The paper deliberated on how outputs of a *looped composition* process, whether used in online, onsite, or hybrid classes, produce writers who are in tune with the requirements of the kind of real-world writing that they will be called to deliver after graduation. Finally, the article concluded that the use of R.E.A.L principles produces a paradigm shift from the way professional writing classes are conventionally conducted.

While such a paradigm shift in writing instruction is necessary, as it produces student-writers who can better author professional documents in the workplace than their predecessors ever could, moving to R.E.A.L. instruction requires a concerted effort on the part of institutions. As most teachers, unlike this one, do not have experience in the corporate world, it

becomes really difficult for them to create bridges between the academic and the work world, even if they want to do so. However, it is not impossible for institutions to build that expertise in their writing instructors. Organizing training and creating interactive online and onsite forums, promoting linkages, and arranging interactions between academia and corporates, by university administrators, can create 'aha' moments for the teachers and empower their efforts in making their project writing instruction more relevant to the workplace. If this helps to bridge the divide between industry and educational institutions, the struggle, the efforts, and the shift are well worth it.

References

Ballantine, B. D. (2010). English and Engineering, Pedagogy, and Politics. In Franke, D., Reid, A., & DiRenzo, A. (Eds.). *Design discourse: composing and revising programs in professional and technical writing* (pp. 219-240). Fort Collins: The WAC Clearinghouse.

Bauer-Wolf, J. (2018). Overconfident Students, Dubious Employers. *Inside Higher Ed*. Retrieved from https://www.insidehighered.com/news/2018/02/23/study-students-believe-they-are-prepared-workplace-employers-disagree

Bhola, S. & Dhanawade, S. (2013). Higher Education and Employability-A Review. *SSRN Electronic Journal*, 45-54.

Bizzell, P. (1982). Cognition, Convention, and Certainty: What We Need to Know About Writing. *Pre/Text 3*, 213-43.

Bourelle, T. (2012). Bridging the Gap between the Technical Communication Classroom and the Internship: Teaching Social Consciousness and Real-World Writing. *Journal of Technical Writing and Communication*, *42*(2), 183-197.

Carradini, S. (2019). Artist Communication: An Interdisciplinary Business and Professional Communication Course. *Business and Professional Communication Quarterly*, *82*(2), 133-152.

Di Renzo, A. (2002). The Great Instauration: Restoring Professional and Technical Writing to the Humanities. *Journal of Technical Writing and Communication 32*(1), 45-57.

Di Renzo, A. (2010). The Third Way: PTW and the Liberal Arts in the New Knowledge Society. In Franke, D., Reid, A., & DiRenzo, A. (Eds.) *Design discourse: composing and revising programs in professional and technical writing* (pp. 243-254). Fort Collins: The WAC Clearinghouse.

Faigley, L., & Miller, T. P. (1982). What we learn from writing on the job. *College English*, *44*(6), 557-569.

Flower, L., & Hayes, J. (1977). Problem-Solving Strategies and the Writing Process. *College English, 39*(4), 449-461.

Franke, D. (2010). Curriculum, Genre and Resistance: Revising Identity in a Professional Writing Community. In Franke, D., Reid, A., & DiRenzo, A. (Eds.), *Design discourse: composing and revising programs in professional and technical writing* (pp. 113-131). Fort Collins: The WAC Clearinghouse.

Ginder, S. A., Kelly-Reid, J. E., & Mann, F. B. (2019). *Enrollment and Employees in Postsecondary Institutions, Fall 2017; and Financial Statistics and Academic Libraries, Fiscal Year 2017: First Look (Provisional Data)*. Washington, D.C: National Center for Education Statistics.

Grace, J. A. (2008). *Working knowledge: Composition and the teaching of professional writing* (ProQuest Dissertations & Theses Global).

Halpern, J. W. (1981). What should we be teaching students in business writing? *The Journal of Business Communication (1973)*, *18*(3), 39-53.

Hancock, P., Howieson, B., Kavanagh, M., Kent, J., Tempone, I., & Segal, N. (2009). Accounting for the future: more than numbers. *Australian Teaching and Learning Council*, 11-80.

Harvey, L. (2000). New realities: The relationship between higher education and employment. *Tertiary Education & Management*, *6*(1), 3-17.

Henze, B., Sharer, W., & Tovey, J. (2010). Disciplinary Identities: Professional Writing, Rhetorical Studies, and Rethinking "English." In Franke, D., Reid, A., & DiRenzo, A. (Eds.), *Design discourse: composing and revising programs in professional and technical writing* (pp. 63-86). Fort Collins: The WAC Clearinghouse.

Herndl, C. (1993). Teaching Discourse and Reproducing Culture: A Critique of Research and Pedagogy in Professional and Non-Academic Writing. *College Composition and Communication,44*(3), 349-363.

Jackson, D. (2013). Business Graduate Employability-Where Are We Going Wrong? *Higher Education Research & Development, 32*(5), 776-90.

Jeansonne, J. J. (1996). *The paradigm shift in technical writing textbook pedagogy* (ProQuest Dissertations & Theses Global).

Lannon, J. and Gurak. L. (2013). *Strategies for Technical Communication in the Workplace*, 2nd ed. Boston: Pearson Education.

Lawrence, H. Y., Lussos, R. G., & Clark, J. A. (2019). Rhetorics of Proposal Writing: Lessons for Pedagogy in Research and Real-World Practice. *Journal of Technical Writing and Communication*, *49*(1), 33-50.

Le Maistre, C., and A. Paré. (2004). Learning in Two Communities: The Challenge for Universities and Workplaces. *Journal of Workplace Learning 16*(1/2), 44-52.

Matthew, E. G. (2016). *Measuring the writing improvement of undergraduate business students in hybrid and face-to-face business communication courses: A comparative study*. (ProQuest Dissertations & Theses Global).

Mentkowski, M., Rogers, G., Doherty, A., Loacker, G., Hart, J.R., Rickards, W., O'Brien, K., Riordan, T., Sharkey, S., Cromwell, L., Diez, M., Bartels, J., & Roth, J. (2000). *Learning that lasts: Integrating learning, development, and performance in college and beyond*. San Francisco: Jossey-Bass and beyond.

Moore, T. & Morton J. (2017). The myth of job readiness? Written communication, employability, and the 'skills gap' in higher education, *Studies in Higher Education*, *42*(3), 591-609.

Mourshed, M., D. Farrell, and D. Barton. (2012). *Education to Employment: Designing a System That Works*. Boston: McKinsey.

Murray, D. (1972). Teach writing as a process not product. *The Leaflet 71*(3), 11-14.

Price, S. W. (1985). *A Synthesis of Materials for using the Process Approach to Teaching Professional Writing (Business, Technical)*. (ProQuest Dissertations & Theses Global).

Reid, A. (2010). The Write Brain: Professional Writing in the Post-Knowledge Economy. In Franke, D., Reid, A., & DiRenzo, A. (Eds.), *Design discourse: composing and revising programs in professional and technical writing* (pp. 254-75). Fort Collins: The WAC Clearinghouse.

Russell, D. R. (2007). Rethinking the articulation between business and technical communication and writing in the disciplines: Useful avenues for teaching and research. *Journal of Business and Technical Communication*, *21*, 248-277.

Slomp, D., Burke, T., Neamtu, K., Hagen, L., Van Ham, J., Miller, K., & Dupuis, S. (2018). Scaffolding for Independence: Writing-as-Problem-Solving Pedagogy. *English Journal*, *108*(2), 84-94.

CHAPTER TWO

TRANSFORMATIVE PEDAGOGY AND STUDENT VOICE: USING S.E.A. PRINCIPLES IN TEACHING ACADEMIC WRITING

Abstract

This paper describes the principles of transformative pedagogy that lead to the development of distinct student voices in academic writing classes. Whether the course is taught at the undergraduate level through research, expository, and argumentative writing assignments, or at the graduate level through literature review essays, research articles, and dissertation writing tasks, students need to be able to develop their voices and make their contributions to knowledge. Correspondingly, professional writing teachers, too, need to teach students how to write voiced project documents, such that they have the student's unique signature, even when situated within a paradigmatic boundary. The article expands on how facilitators of academic writing courses can incorporate the S.E.A. principles of scaffolding, empowerment, and awareness, as triple enablers into their teaching methodologies, in order to develop student voices, and usher in transformation successfully. As one of the few articles to examine how graduate and undergraduate academic writing instruction, including Writing Across the Curriculum (W.A.C.) and Writing in the Disciplines (W.I.D.) teaching, can be recast to develop student voices, the paper can be helpful to readers looking for resources and recommendations to incorporate transformative pedagogy into their teaching. The chapter was first published under the same title in the *Journal of Effective Teaching in Higher Education,* Volume 3, Number 2 in Fall 2020.

2.1 Introduction

Writing is a process of being and becoming. The way one writes reflects the way one thinks, so any change in the writing process causes a change in the thinking process as well. As academic writing instructors and teachers who teach W.A.C. (Writing Across the Curriculum) and W.I.D. (Writing in the Discipline) classes, we train students on how to write and, therefore, influence how they interpret what they read, as well as how they organize their ideas on paper. Teaching writing can be a way to develop student voices such that they can contribute to academic dialogs, knowledge creation, and even social change. If developing voices in students is the goal of writing teachers, what is the pedagogy that teachers of undergraduate or graduate academic writing classes can adopt to better achieve course goals? While there have been numerous publications on the topic over the last four decades, as the theme is neither new nor ever irrelevant, this may be one of the few articles to examine the role of both undergraduate and graduate writing instruction in the development of student voices, and to investigate S.E.A., or the principles of scaffolding, empowerment, and awareness as triple enablers in the teaching effort.

2.2 What is student voice?

Voice, as used in this article, is how each student contributes to scholarship. Developing a voice in writing is not easy; it involves struggle, risk-taking, and reconstruction. As the process of acquiring a voice through education in general, and writing in particular, is a way of 'becoming,' voice acquisition is an important marker of academic success. However 'becoming' does not always happen—the student's voice can be shut down because of various factors. As 'becoming' does not occur in isolation, students need one another, and a mentor in their instructor, in order to develop their voices. As many students today are not producing 'voiced' writing, reframing of composition instruction with a new pedagogical underpinning can not only preempt the blocking of student voices, but also metamorphose the classroom into a creative space where each student asserts "I am" in his or her writing.

Can a voice echo, or should it be unique? Since voice is the active expression of an individual, and distinguishes one writer from another, it should exist by itself, and in contrast to other voices. Also, voice signals participation, and is an active part of the social production of meaning. If voice, as Simon (1987) perceives it, is "a discursive means whereby students make themselves present and define themselves as active authors

of their world" (p. 377), voice, as described by Mayaba et al. (2018), is an instrument or "force for social change" (p. 1). In the context of higher education, voice, as a marker of presence or a tool for social innovation, emerges from what Harrell-Levy et al. (2010) describe as the students' critical analysis of a subject using their individual and collective experiences as, and in, a class community (p. 80). Byker et al. (2017), on their part, define student voice as a term that "honors the participatory roles that students have when they enter learning spaces like classrooms," and point out that "student voice is the recognition of students' choice, creativity, and freedom" (p. 119). What is important to note here, is that there is an emergent consensus that voice is a major indicator of successful participation and scholastic growth in academic writing classes that include W.A.C. and W.I.D. courses.

The absence of voice, by implication, is a negation of a student's identity. When a student is taught to parrot or merely repeat another's thoughts, even if it is in the name of research, it is a sign of a creativity vacuum. When it happens in the classroom, it may even indicate that oppressive conditions from the outer world have infiltrated within. If students feel marginalized, silenced, or afraid of expressing their individual interpretations in their academic work, it signifies their loss of voice, either under the weight of academic norms or due to societal inequities. In this context, a writing classroom, by focusing on voice development, can make a difference. When a teacher succeeds in promoting diverse voices in the classroom, it implies that every student has gained the power to be heard. Since to drown voice is to deny students their basic humanity, teaching students–including those from marginalized communities–to acquire voices and usher in change through their writing, restores equity into the classroom and academic writing that includes W.A.C. and W.I.D. writing.

Students develop voices and express themselves when the writing teacher succeeds in creating a safe, dynamic, learning space in the classroom, despite what may be happening outside. Developing a voice thus becomes, as Lensmire (1988) puts it, "a way to distinguish yourself from others and a way of embedding yourself, your writing, and your interpretations into public or semi-public spheres such as the classroom" (p. 273). Since the classroom is a microcosm of the world outside, and our writing reflects the way we think, fostering voice, whether the student is interpreting readings or writing professionally, is not only integral to the development of the students' persona but can even lead to social transformation.

Given this background, it is obvious that the role of the teacher in the development of voice is both central and critical. S/he needs to operate on the premise that teaching and learning is a two-way proposition, and

accept the role of a mediator in identity formation. S/he needs to recognize that student-writers face difficulties in articulating complex thoughts in academic prose, even if they are native speakers of the English language. While Lensmire (1988) maintains that the writing teacher needs to help students tide over difficulties in finding "outer words to express inner meanings" (p.273), Harrell-Levy et al. (2010) contend that the teacher's job is to develop a group of identity explorers, as they establish:

> a community that fosters the type of openness and daily feedback that facilitates the identity exploration of each student. When students feel respected and safe enough to air their honest thoughts, an atmosphere of trust and community develops. In such an atmosphere, a process of sharing and reflecting leads to a different, deeper type of learning about the material, how to think about the material, and how to think about oneself. (p. 83)

Even if the teacher is an important aspect of the students' voice acquisition, it must be noted that the teacher's function is to be supportive, not normative. Voice development cannot happen when, as Turner (2006) points out, "a teacher tells the students what to do, when to do, and how to do everything" (p. 28). Student voices are never static or inert, but evolving and diverse. A cookie-cutter approach cannot lead to voice acquisition in academic and professional writing contexts, either in the undergraduate or the graduate classroom. Students acquire their voices in the writing class at a point in life when they do not imagine themselves as capable of doing so. However, if the opportunity is missed, students may end up not knowing how to express their voices all through their lives.

  A text's meaning and value, as the meaning and value of research, are dependent on how it is read and interpreted, by whom, and from where, and through which ideology and framework. If the acquisition of a research persona or voice, as Lillis et al. (2015) point out, "is to acquire the capacity for semiotic mobility" (p. 24), it needs a student-centered classroom environment to develop and manifest itself. If students are to mature as writers, adopt positive attitudes towards written work, and demonstrate growth in writing performances, they need an academic writing classroom where risk-taking is expected, trust is established, choice is available, authority is shared, and writing is viewed as a meaning-making event. The process by which writing teachers guide students though existing paradigms in the complex world of academia involves some handholding. Since new writers and scholars not only learn the intricacies of writing discourses, but also the way to grow their academic voices and academic personae from

their instructor, they are like 'apprentices' who have come to learn the necessary writing skills from the 'guru,' or the writing teacher.

What kind of teaching method adopts such a mentoring approach towards writing instruction? What type of a pedagogy successfully rewards and recognizes students' attempts at voice creation? What are the markers of such a pedagogic system? How does the practice affect the teacher and the student individually? How, if at all, does it transfigure the framework of undergraduate and graduate academic writing classes, including W.I.D. and W.A.C. courses? To be able to answer these questions systematically, the paper is divided into the following sections: Section two discusses transformative learning and how it nurtures student voices; Section three elaborates on S.E.A. or the scaffolding, empowerment, and awareness principles of transformative pedagogy for their ability to create an academic environment where student voices can be fostered; and Section four wraps up the discussion by pointing out that a transformative pedagogic approach not only grows students' voices but also empowers writing instructors and alters their self-perceptions.

2.3 What is Transformative Pedagogy?

Transformative theory, in the academic context, posits that students can achieve their potential through transformative experiences via participation in an academic community. In this sense, transformative pedagogy can be especially relevant to the teaching of academic and professional writing discourses. In fact, transformative pedagogy may well be a methodological breakthrough in writing pedagogy, since it enables students to see the interconnectedness of texts, or argue for a new line to problem solving, or approach to research through their writing.

The theory of transformative learning, first propounded by Mezirow (1978), proclaimed that learning can revise the way we think, feel, and act. Believing in transformation as the primary goal of education, this theory impacted these fields in particular: social activism, higher education, adult literacy, and human resources development. Mezirow (1991) eventually turned away from social activist implications of transformative learning in favor of a focus on individual growth and development. Transformative learning, as he saw it, triggers a "critical assessment of assumptions," "exploration of options for new roles," "building of competence, and self-confidence in new roles and relationships" (p. 109-110).

Transformative learning, hence, was described by Bass (1998) as seeking ways to include other ways of knowing, of expanding our concepts of reasoning, and, finally, of transforming writers as well as institutions (p.

254). The symbiotic relationship of students, with one another and with their surroundings, including the teacher, is central in this pedagogy. Transformative pedagogy not only involves critical questioning that raises students' awareness of their assumptions, but also marries contemplation of the subject matter with self-scrutiny and scrutiny of the surrounding environment. In other words, transformative pedagogy reframes a student's relationship with content, fellow students, teacher, disciplinary, and professional writing paradigms. As the transformative approach aims to promote students' awareness of other perspectives, Donnell (2007) correctly indicates that transformative teachers urge students to "think creatively and critically" and foster "collaborative learning practices" (p. 225). Meyers (2008) takes the thought forward when he points out that transformative instruction discourages teaching styles that increase the power differential between teachers and their students (p. 220). Transformative practice, in fact, disrupts the imperial setup of the traditional classroom where the teacher is at the center and the source of all information flow. Instead, transformative writing teachers situate themselves at the hub of a more democratic, crisscross flow of ideas making it clear to all stakeholders that academic writing is dialogic and can even be oppositional within a local, social, or disciplinary context.

If academic writing teachers, including W.A.C. and W.I.D. instructors, have to succeed in their mission of expanding students' awareness of professional contexts, and the big picture, so students can shift paradigms or create new ones, they will need to embrace transformative pedagogy and its theoretical perspectives to guide and support their efforts. The following section briefly discusses how academic writing theorizing is reframed in transformative pedagogy, before expanding on how the transformative approach can be implemented in both undergraduate and graduate classes in the effort to nurture and grow student voices.

2.4 Academic Writing and The Transformative Approach

Academic writing, as Wideman (2005) describes it, is a way to attain and demonstrate disciplinary knowledge as well as a means to acquire a presence in the academic world (p. i). Academic writing is taught to undergraduates under various names: expository writing, professional writing, argumentative writing, and so on. Graduate academic writing, too, is taught under different appellations, and typically works around literature review papers, academic articles, or dissertation writing. All academic writing courses, including W.I.D. and W.A.C. courses, end in student writing outputs, such as is common in the field of higher education. Born

out of a dialectical interplay between writer, reality, audience, and conventions, the writing output presents research, and may or may not, include an actionable component. As academic writing classes almost always teach research reporting and citation conventions, Davis (2009) aptly declared that academic writing in the agonistic tradition:

    a. Is based on the discourse of the academic elite
    b. Includes critique
    c. Is derived from the works of others
    d. Reflects the student (or the self) as constructed by the 'insider' discourse of the academy. (p. 11)

Agreeing and extending the notion further, Inge et al. (2015) termed academic writing as, "an examination of the multiple identities that one has to negotiate in the process of producing a piece of academic prose, an awareness of how these identities interact with wider structures and relations existing in academia and beyond, and a consciousness of the processes and practices surrounding the production, transmission, and use of academic texts" (p. 154). What this implies is that, if academic writing, including professional writing classes, has to develop student voices in both undergraduate and graduate students, it has to begin with the setting up of befitting course outcomes. Put differently, course setup, classroom practice, and assignment construction have to focus on 'voice' development if the course is to achieve that objective directly.

      How does transformative pedagogy impact the setting up of an academic writing class? In an undergraduate writing class, a teacher is no longer content with focusing only on training students to write a five-paragraph or a five-page essay with opening and closing arguments, thesis statements, and topic sentences, with research support at appropriate places. Instead, they choose to have students connect complex seminal articles from various disciplines in unexpected ways in expository writing essays. Such tasks lead to the acquisition of voice, as it entails that students not only probe into layered arguments to arrive at the learning from one essay, but that they also envisage how that idea connects with the learning and ideas of another layered text. Similarly, requiring students to do feasibility studies or draw up recommendation plans for change in their workplace, schools, or townships using field work, published best practices, and case studies, pushes student writers to take unique, innovative departures within a theoretical matrix leading to new pathways, prototypes, and paradigms. Such W.I.D. and W.A.C. assignments can go a long way in catalyzing change, both in students and in their surroundings. With a transformative pedagogy, the undergraduate academic writing teacher offers students

opportunities and strategies to make their papers voiced, not just well cited. The teacher creates writing prompts that move students from conventional summarizing to connective thinking, problem solving, and imaginative ideation. Feedback in the transformative undergraduate writing classroom, accordingly, rewards and recognizes the students' ability to grapple and wrestle with complex ideas in order to create new meanings or real world linkages.

Graduate writing classes face both similar and different challenges. As graduate students write out their literature reviews, academic articles, and master or doctoral dissertations, they often feel, as Stevens (2015) highlights, a "loss of identity during the course of their studies and hold academic writing responsible for it. This loss is expressed as a stripping away of creativity and being made to write in a way that felt abstract and not representative of who they are or want to be. Academic writing feels like something I've produced that is separate to me and is passed on to the audience" (p. 268). Graduate academic writing teachers, using a transformative pedagogy, can fix the sense of loss by urging students not to practice research reporting, uncritical acceptance, and assimilation but highlight their understanding of what is satisfactory, generative, and meaningful in their research. In the transformative schemata, graduate academic writing teachers help students to create knowledge, rather than train them just to follow disciplinary norms and academic conventions. They coach graduate academic writers to be non-derivative, even when operating within discourses of learning and writing. In transformative pedagogy, graduate academic writing is neither an elitist exercise nor a ticket to academy insidership. Hence the task, the instruction, and the feedback focus on how a graduate student displays his or her acquired mastery over current research, while finding gaps within it wherein to situate his or her unique study. Like the undergraduate teacher, the academic writing instructor in a graduate writing class nurtures and rewards the student writers' attempts to find their academic niches. In this sense, transformative undergraduate and graduate writing teachers work at developing voices in students' writing, even if the scope of graduate writing tasks and papers may be larger.

Transformative writing adopts a new take, not only on the relationship between students and teachers, but also on the relationship between the student and texts, between the student and peers, as well as the student and the audience. As the writing teacher embraces these changes, s/he may do well to be grounded in S.E.A., or the scaffolding, empowerment, and awareness principles of transformative pedagogy. The three subsections to follow explore how the three principles of transformative pedagogy can

empower the teachers' efforts and recast academic writing instruction for more positive outcomes.

2.4.1 S.E.A. Principles: The Empowerment of Transformation

Writing in an academic setting should empower and enrich, rather than diminish a writer's sense of self. Empowerment becomes possible when students do not turn in lifeless, guarded responses, but develop individual takes on their readings and research. How can the teacher create or incorporate the empowerment principle in the undergraduate classroom? As indicated in the previous section, one way the academic writing teacher can create transformative pedagogic experiences for students is by assigning creative writing tasks and composing inspired writing prompts. What is signified by a creative or inspired prompt? Tasking students to find relationships between disparate readings through the power of their ideas, such as in the sample prompt[1] used in my Expository Writing class at Rutgers University does, can work. When students feel empowered enough to interplay non-linked disciplines and unrelated texts, such as a war memoir, a psychology lesson, and a religious tenet, through layered connective thinking in response to a transformative writing prompt, they become participants in a transformative pedagogic experience. Since interdisciplinarity has valid and strong connections with the experience of transformation, asking students to take and defend innovative positions on interdisciplinary texts can be both handy and effective. Again, when student-writers are encouraged to interpret or illuminate one single text, say Rebecca Skloot's *The Immortal Life of Henrietta Lacks* (2017), from various disciplinary standpoints, be they scientific, business, racial, historical, ethical, social, literary, or a mix of them— as we see in Skloot's prompts[2] —students develop voices. Put differently, distinctive academic experiences result, as Virtue et al. (2018) testify, when academic writing teachers empower their undergraduate writing students to make connections and pick perspectives depending on their interests and backgrounds, as with Skloot's text. Correa (2010) credits such empowerment outcomes to be the resultant of the teacher's efforts at "helping students recognize not only the various types of voices that can be brought into a text but also the sources of those voices, the cultural or disciplinary ways in which these voices can be brought in, and how the voices can be creatively recombined with other voices to achieve certain purposes (e.g. to argue or explain a point)" (p. 81). Similarly, specialized business or technical writing classes taught in a W.A.C. or W.I.D. program can grow student voices when they encourage students to adopt and justify their unique approach to solving a problem in

their project documents, which may range from white papers to presentations, business proposals to technical reports. When students take innovative lines of argument within the professional or technological paradigmatic framework in their project writing, voice and originality is achieved and manifested.

When empowerment happens, students write about what they like, like what they write, and share it with others. To Levin (2000), the manifested connective thinking and interdisciplinary takes expressed by students in their writing is a consequence of their empowerment, since students now "recognize unseen capacities and knowledge in themselves and others, writ[e] in new voices, have a stronger sense of voice, question conventional roles, ideas, and stereotypes, bring out feelings and thoughts they didn't know they had, and experience new ways of learning and being" (p. 45). Through empowerment, the academic writing teacher emboldens the undergraduate pupil to exhibit connective, interdisciplinary, and change-oriented thinking or voiced writing.

At the graduate level, empowerment, and the development of an authoritative voice, comes through the slant and the originality of the research. The teacher's task here is to demonstrate how authority emanates from being able to speak from a unique vantage point within a discourse community, be it humanities, social sciences, or the scientific disciplines. Even if writing for publications and the writing of dissertations require the learning of disciplinary and citation conventions, the academic writing teacher should be careful not to teach these to the exclusion of all else. Empowering graduate academic writing instruction urges and audits how researchers are developing influential voices by what Correa (2010) describes as "the opportunity to discuss the value of both the discourses they already possess and of the discourses they are being asked to produce" (p. 80). Graduate students develop a sense of self and voice from the depth and breadth of their research or literature reviews, the innovativeness and exclusiveness of their approaches, and the positions they take as insiders or outsiders of the communities to which they wish to gain affiliation. Just as with the undergraduate instructor, the graduate academic teacher would focus all instruction, feedback, and grading, around voice manifestation.

It must be pointed out that a writer's presence in any form of academic writing, whether undergraduate or graduate, is not connected to the use of the personal pronoun 'I'. Voice, in the empowerment context of transformational academic writing, is not a resultant of the use of the personal pronoun but is, as Comfort (1995) points out, "a convergence of elements: choice of subject matter for phenomena, methods of working through arguments, types of evidence,…and underpinning assumptions,

even what is left unsaid" (p. 37). Such a discourse is empowered and voiced, and even when "conditioned by an array of social, historical, and cultural influences within the hierarchical power relationships that constitute academic institutions" (ibid.), questions, critiques, and interrogates it.

2.4.2 S.E.A. Principles: The Expanded Awareness of Transformation

Expanding awareness in students is another strategic and fundamental principle of transformative pedagogy. Student voices acquire authenticity and expansiveness through critical questioning. Critical questioning is the kind of questioning that marries contemplation of the subject matter with self-scrutiny and cognizance of various perspectives. As per Lillis (2015), a transformative pedagogy foregrounds such questions of the text:

> How have particular conventions become legitimized—and what might alternatives be?
> To what extent, do they serve knowledge making—and are other ways of making knowledge, and other kinds of knowledge/ knowing possible?
> Whose epistemological and ideological interests and desires do these reflect and enable—and whose interests and desires may be being excluded? (p. 9)

When students ask questions when they write about texts or about their projects, they become more aware of how and where their writing is to be situated. What is transformed through the 'transformative approach' is the way of seeing and being. For instance, awareness is expanded when students connect or relate various readings or identify problem areas and propose change. From the new critical awareness s/he acquires, the academic writing student—whether undergraduate or graduate, whether in a W.A.C. or a W.I.D. class—learns how to synthesize and interplay varied contexts and discourses.

As with empowerment, expanded awareness leads to the opening up of dialogic and community spaces in undergraduate writing classrooms. As with imaginative prompts, critical questioning pushes students toward transformative goals, or what Mitchell (2013) describes as "intertextuality, alternative understandings, and discovery of new frontiers of knowledge" (p. 16). Harrington (2015) endorses the idea when she points out that transformative writers need "to step back, imagine, and actually begin to do things differently—more creatively, more thoughtfully, and more radically" (p. 13). With expanded awareness, such possibilities can be realized in

academic writing classes, including W.A.C. and W.I.D. courses. As awareness is not a finished state, but something that is achieved through critical questioning, the writing teacher would want to set up communal spaces and co-operative relationships between all classroom stakeholders that include the student, peers, texts, instructor, and audience. When the undergraduate student is self-aware, s/he moves from an attitude of 'submission' to authors whose works are being read and researched, into connecting and holding a conversation with them, and with the audience who may be the students' project patrons.

Expanded awareness in a graduate academic writing class manifests itself in multivocality, since graduate academic writers are now encouraged to question existing ideas and adopt distinctive research angles. With the help of the teacher, they can present their research innovatively. In transformative graduate writing, expanded awareness generates interdisciplinary conversations and new relationships between the writer's voice, the research hypothesis, and the disciplinary field. Since today's academic writing students are tomorrow's professionals, dialogues about research discoveries are necessary for progression and development.

Since conflict exists between self-expression and the conformity that disciplinary practices and conventional paradigms impose, writers need to be aware of the complex of activities, experiences, and purposes that are clubbed under the category of academic writing norms, even if they intend to transcend them. As the task is challenging, students need scaffolds to negotiate through expected norms, and not be limited by them. Hence, in addition to empowering students through transformative prompts, and providing them with an expanded awareness of disciplinary practices, teachers may want to adopt the principle of scaffolding to show how students, as emergent researchers and novice writers, can resolve any conflict that exists, and acquire voices. The next section discusses how incorporating the scaffolding principle in teaching academic writing, including W.A.C. and W.I.D. courses, can grow student voices and provide consistent results. The aim in the section is to explore how scaffolding works, and can be used effectively to nurture students' voices.

2.4.3 S.E.A. Principles: The Scaffolding of Transformation

Academic writing is challenging, because it is located within a global complex of signs and an international knowledge economy. While empowerment has much to do with assignment design and expanded awareness impacts course objectives, scaffolding affects course organization and delivery. Scaffolding, as Bliss & Askew (1996) describe it, involves

keeping the task constant but manageable (p. 39). Scaffolding entails breaking up the writing work into chunks and building one part onto another so the parts contribute to the whole, seamlessly. As they impact teaching methodology as well as course delivery, scaffolds have to be well defined and comprehensible. If it has to be successful, scaffolding requires organized procedures to be welded onto, and developed around, the writing process and its three key phases of outlining, drafting, and revising. While scaffolding is required for all writing instruction, it is even more fundamental in transformative pedagogy because the task of nurturing an original voice is an onerous one.

Scaffolding, in the context of voice, refers to a set of techniques that the instructor uses to move students from understanding how to manifest their voices independently towards finally doing so. While a literature search shows an agreement with the viewpoint of Read (2010) about how instructors' inputs during the scaffolding process are all important when it comes to students' voice development, some critics like Bodrova and Leong (1998) caution that the goal is to progressively decrease the level of assistance they initially provide, so students can develop their voices on their own and become self-sufficient (p. 5). What this means is that, even though the teacher provides the pupil with a range of resources through the outlining, drafting, and revising stages of the writing process, s/he should leave the choice to students to use the resources as per their needs. All the strategies I discuss in this section are part of the toolkit I have evolved and used successfully while teaching transformatively, at both levels, in my academic, business, and technical writing classes since 2008.

A key scaffolding strategy that works well, and can be used across the board in undergraduate academic writing classes, is modeling. In the outlining stage, mind maps and other graphic organizers can be used to model and help students with ideation. Mini-lessons could be devised using newspaper editorials to model Aristotle's persuasive triad of ethos, pathos, and logos. As students go through various levels of outlining—so an idea grows into a levelled detailed plan—students can examine models provided by the teacher with the intent to learn how to attach microdetails to their macro outlines. As students begin drafting, workshops for analyzing successful voiced writing models can be held, where current students closely read, dissect, and analyze writing samples of former students, individually and in small and big groups. This can go a long way in promoting students' understanding of how transformation works and how voice is manifested. Students not only understand how to isolate writing stratagems that model writers used to manifest their voices in these writing workshops, but they also figure out how to mix and match the strategies

while writing their own essays. In the revision stage, when the essays are being completed, it becomes necessary to hold stepped revision cycles and guided peer review sessions. So that the peer review workshops are useful, questions, criteria, and checklists that focus on voice manifestation are required. Students can use them both for peer and self-review of their essays and projects, while revising, proofing, and finalizing them.

Similarly, scaffolds in a graduate writing class help students incorporate transformative processes into their writing. As in undergraduate classes, each stage has a distinct focus, with the teacher offering feedback particularly at the beginning and end of every stage. In the outlining stage, the teacher offers inputs and helps in the creation of a multi-levelled plan. Components of an introduction, such as an opening statement, need-establishment, literature review, hypothesis construction, and essay overview, can be innovatively demonstrated with reading and writing exercises that incorporate examination of model papers published in reputed journals. What the scaffolding does here is to offer graduate writing students practice in expanding their range and comfort in reading and writing for academia. This is important because transformative pedagogy at the graduate level prompts students to move beyond the normative "academic socialization approach," as Jacobs (2015) terms it, to the kind of academic writing where the literacy practices of disciplines are critiqued and contested (p. 152). Covert tensions may exist between entrenched, legitimized, scientific writing conventions, such as the classical I.M.R.A.D. (or Introduction-Methods- Results-Analysis-Discussion) template for scientific writing, and their disciplinary variations, or even within the thematic arrangement that the arts and the humanities require students to adopt. As per Stevens (2015), departmental academic writing cultures and university guidelines, where these exist, also inevitably, come into play (p. 276). Graduate students could evolve a scholastic guide for themselves, with the teacher's help wherever necessary, through searching, isolating, and evolving best practices from a close and a thorough inspection of the exemplar articles in periodicals that they picked. Techniques for discussing the literature or the methodology, whether they are related to laboratory setup, market research, or sample distributions, are scrutinized. Similarly, guidelines can be extracted and practice can be offered in various ways of presenting hypotheses, interpreting artifacts, outlining procedures, analyzing results, highlighting inferences, and forecasting impact, through modeling and scholarly article analyses. What transformative graduate writing pedagogy does here is not just tender scaffolds to facilitate the writing of each section within the disciplinary macrostructure, but also proffer ways to turn granular presentational practices into co-acting synergistic ones. Whether graduate

students are writing scientific studies or literary papers, sociological treatises or marketing investigations, a scaffolded transformative writing pedagogy offers demonstrations and exercises, as well as self-study opportunities and group review platforms, to ensure that students are moving away from homogenized to original, inventive, and voiced writing, irrespective of the disciplines they belong to. The goal here is to help graduate students place their research at boundaries or intersections of various theories and perspectives so they can manifest their voices and carve their own niches in the graduate academic writing world.

Scaffolding is central to student success, whether in an undergraduate or a graduate academic writing classroom or a W.A.C. or a W.I.D. course. A common element in teaching at both levels is not only the structuring of the process into three distinct phases of outlining, drafting, and revising, but also the marking of the milestones with peer review workshops. Both undergraduate and graduate instructors are encouraged to put much care into devising the peer review workshops, as they are important scaffolds to support and nurture the growth of student voices. Since the output of one process becomes the input for the other, students get to experience how each stage is linked, and builds on the one that went before. If time permits, one-on-one student teacher conferences can also be held at the end of each stage, as they can prove a useful scaffold for the student writer. In fact, the scaffolding principle itself not only goes a long way in bringing in structuring and organization into academic writing instruction, but also ensures that positive results are achieved consistently in growing students' voices in both undergraduate and graduate academic writing courses.

2.5 Conclusion

The value of transformative learning is often difficult to gauge because it is an outcome of invested deliberations, creative ruminations, and change-oriented thinking. It results in students developing close reading skills, independent thinking skills, and layered writing skills. These skills take time to manifest themselves, but what is important is that undergraduate students leave a transformative academic writing class with an awareness of their emergent voices and enhanced skills of interpretation and argumentation. The takeaways for graduate students from their academic writing class similarly are enhanced composition skills and the ability to balance and interplay individual expression and interdisciplinary components. When academic writing students—whether undergraduate or graduate, or participating in a W.A.C. or a W.I.D. class—understand the

value of transformative writing practices in the development of their professional identities in academic writing and community spaces, they become aware of their ability to contribute to change and scholarship even as they develop individualized distinctive voices.

From the teacher's standpoint, the rewards are high as well. Incorporating S.E.A. principles not only makes instructors acutely aware of their augmented role in developing student voices, but it also empowers them to reach out to students more effectively through creating scaffolds. As individuals who transformed students' writing, academic writing teachers experience elevated self-esteem. While receiving positive student evaluations is a bonus, what is perhaps the most rewarding for transformative writing instructors is the immense satisfaction they gain from the knowledge that they helped their students develop voices and contribute to the academy and the community.

Notes

[1] Sample Expository writing prompt: In "Selections from Reading *Lolita* in Tehran," war memoir writer Azar Nafisi, and her select group of students, find that imaginatively engaging with fictional works helps them contend with the "absurd fictionality [that] ruled our lives" under a totalitarian regime. How far, if at all, does that engagement reflect the smart shopping of the psychological immune system that social psychologist Daniel Gilbert discusses as happening "behind closed doors, in the backroom, outside of our awareness" in "Immune to Reality"? Or would you rather say that the secret deliberations lead to the group developing interconnectedness that Buddhist thinker, Robert Thurman, terms in his essay, "Wisdom," as the manifestation of the deepest awareness that comes "when your consciousness begins to turn inward and gaze upon itself"?

[2] *The Immortal Life of Henrietta Lacks* by Rebecca Skloot narrates the case of Henrietta Lacks, "a poor black tobacco farmer whose cancerous cells, taken without her knowledge in 1951, became one of the most important tools in medicine, vital for developing the polio vaccine, cloning, gene mapping, *in vitro* fertilization, and more. Henrietta's cells have been bought and sold by the billions, yet she remains virtually unknown, and her family can't afford health insurance" (book cover/promotion). The incident sparked off a host of debates around questions of racial discrimination, medical ethics, scientific research, and medical waste ownership. A list of transformative argumentative essay prompts on this non-fiction book is available on pages 19 to 28 of the *Teacher's Guide*. Here is the link to the resource <http://rebeccaskloot.com/wpcontent/uploads/2011/03/RHSklootTeachersGuideLORES.pdf>

References

Bass, E. (1998). *A narrative analysis of a transformative pedagogies impact on academic literacy* (Publication No. 9838459). [Doctoral dissertation, Temple University]. ProQuest Dissertations & Theses Global.

Bliss, J. & Askew, M. (1996). Effective teaching and learning: Scaffolding revisited. *Oxford Review of Education, 22*(1), 37-61.

Bodrova, E. & Leong, D. (1998). Scaffolding emergent writing in the zone of proximal development. *Literacy Teaching and Learning*, *3*(2), 1-18.

Byker, E. J., Putman, S. M., Handler, L., & Polly, D. (2017). Educational Technology and Student Voice: Examining Teacher Candidates' Perceptions. *World Journal on Educational Technology: Current Issues*, *9*(3), 119-129.

Castelló, M., & Donahue, C. (Eds.). (2012). *University writing: Selves and texts in academic societies*. BRILL.

Comfort, J. (1995). *Negotiating identity in academic writing: Experiences of African-American women doctoral students* (Publication No. 9544542). [Doctoral dissertation, The Ohio State University]. ProQuest Dissertations & Theses Global.

Corbett, S. J. (2015). *Beyond dichotomy: Synergizing writing center and classroom pedagogies*. WAC Clearinghouse.

Correa, D. (2010). Developing Academic Literacy and Voice: Challenges Faced by a Mature ESL Student and Her Instructors *PROFILE: Issues in Teachers' Professional Development*, *12*(1), 79–94.

Davis, K. M. (2009). *Personal writing, academic writing, and critical pedagogy in the community-based classroom*. (Publication No. 3350301). [Doctoral dissertation, Wayne State University]. ProQuest Dissertations & Theses Global.

Donnell, K. (2007). Getting to we: Developing a transformative urban teaching practice. *Urban Education, 42*, 223–249.

Flowerdew, J., & Peacock, M. (Eds.). (2001). *Research perspectives on English for academic purposes*. Cambridge University Press.

Gilbert, D. (2006). Immune to Reality. In Richard E. Miller and Kurt Spellmeyer (Eds.), *The New Humanities Reader* (pp. 141-50). Houghton Mifflin.

Greene, C. (2005). Education as the practice of freedom. *Equity in Education*, *84,* 50–53.

Harrington, K. (2015). Border Crossing. In T. Lillis et al (Eds.), *Working with academic literacies: Case studies towards transformative practice* (pp. 11-13). The WAC Clearinghouse/ Parlor Press.

Ingle, J. and Yakovchuk, N. (2015). Writing Development, Co-Teaching and Academic Literacies: Exploring the Connections. In T. Lillis et al (Eds.), *Working with academic literacies: Case studies towards transformative practice* (pp. 143-154). The WAC Clearinghouse/ Parlor Press.

Jacobs, C. (2015). Opening up The Curriculum: Moving from The Normative to The Transformative in Teachers' Understandings of Disciplinary Literacy Practices. In T. Lillis et al (Eds.), *Working with academic literacies: Case studies towards transformative practice* (pp. 131-142). The WAC Clearinghouse/ Parlor Press.

Lensmire, T. J. (1998). Rewriting student voice. *Journal of curriculum studies*, *30*(3), 261-291.

Levin, J. A. (2000). *Lifework: Connecting academic writing, teaching, and the sense of self* (Publication No. 9967389). [Doctoral dissertation, The University of Nebraska]. ProQuest Dissertations & Theses Global.

Levine, J. (2014, October). Jack Mezirow, who transformed the field of adult learning, dies at 91. *Teacher College Newsroom, In Memoriam*. Columbia University. Retrieved from https://www.tc.columbia.edu/articles/2014/october/jack-mezirow-who-transformed-the-field-of-adult-learning-d/

Lillis, T., Harrington, K., Lea, M., & Mitchell, S. (2015). *Working with academic literacies: Case studies towards transformative practice*. The WAC Clearinghouse/ Parlor Press.

Lillis, T. (2015). Towards Transformative Design. In T. Lillis et al (Eds.), *Working with academic literacies: Case studies towards transformative practice* (pp. 8-12). The WAC Clearinghouse/ Parlor Press.

Lillis, T., & Curry, M. J. (2010). *Academic writing in a global context: The politics and practices of publishing in English*. Routledge.

Harrell-Levy, M.K & Kerpelman, J. L. (2010). Identity Process and Transformative Pedagogy: Teachers as Agents of Identity Formation, *Identity, 10*(2), 76-91.

Harrington, K. (2015). Border Crossing. In *Working with academic literacies: Case studies towards transformative practice*. The WAC Clearinghouse/ Parlor Press*, 13-14.

Mayaba, N.N., Ralarala, M. & Angu, P. (2018). Student Voice: Perspectives on Language and Critical Pedagogy in South African Higher Education. *Educational Research for Social Change*, *7*(1), 1-12.

Meyers, S. A. (2008). Using transformative pedagogy when teaching online. *College Teaching*, *56*(4), 219-224.

Mezirow, J. (1978). Perspective transformation. *Adult education*, *28*(2), 100-110.

Mezirow, J. (1991). *Transformative dimensions of adult learning*. Jossey-Bass.

Mezirow, J., & Taylor, E. (2009). *Transformative learning in practice: insights from community, workplace, and higher education* (1st ed.). Jossey-Bass.

Mitchell, S. (2013). Open-ended Transformation: Ethnographic Lens and a Suspicious Tendency. In T. Lillis et al (Eds.), *Working with academic literacies: Case studies towards transformative practice* (pp. 15-25). The WAC Clearinghouse/ Parlor Press.

Martin, E. V. (1995). *Reconceiving the voice-to-style relationship in academic discourse: A study of students' initial perceptions and emerging writing practices*. (Publication No. 85633580). [Doctoral dissertation, Illinois State University]. ProQuest Dissertations & Theses Global.

Nafisi, A. (2006). Selections from Reading *Lolita* in Tehran. In Richard E. Miller and Kurt Spellmeyer (Eds.), *The New Humanities Reader* (pp. 312-24). Boston: Houghton Mifflin.

Read, S. (2010). A model for scaffolding writing instruction: IMSCI. *The Reading Teacher*, *64*(1), 47-52.

Simon, C. R. (1987). Empowerment as a pedagogy of possibility. *Language Arts*, *64*(4), 370-81.

Skloot, R. (2017). *The immortal life of Henrietta Lacks*. Broadway Paperbacks.

Skloot, R. (2020, June 12). Teacher's guide. Retrieved from http://rebeccaskloot.com/wp-content/uploads/2011/03/RHSkloot TeachersGuideLORES.pdf

Stevens, F. (2015). There is a Cage Inside My Head and I Cannot Let Things Out: An Epistemology of Collaborative Journal Writing. In T. Lillis et al (Eds.), *Working with academic literacies: Case studies towards transformative practice* (pp. 267-79). The WAC Clearinghouse/ Parlor Press.

Thaiss, C., Bräuer, G., Carlino, P., Ganobcsik-Williams, L., & Sinha, A. (Eds.). (2012). *Writing programs worldwide: Profiles of academic writing in many places*. Parlor Press, LLC.

Thurman, R. (2004). Wisdom. In Richard E. Miller and Kurt Spellmeyer (Eds.)*, The New Humanities Reader*. (pp. 434-450). Boston: Houghton Mifflin.

Turner, Y. (2006). Chinese students in a UK business school: Hearing the student voice in reflective teaching and learning practice. *Higher education quarterly*, *60*(1), 27-51.

Virtue, E., Wells, G., MacKusick, C., Murphy-Nugen, A., Rose, A., & Snyder, M. M. (2018). *The Immortal Life of Henrietta Lacks*: Using a Common Read to Transform a Learning Community. *Learning Communities Research and Practice*, *6*(1), 4.

Wideman, J. E. (2005). *Brothers and keepers*. Harcourt: Houghton Mifflin.

CHAPTER THREE

PUBLISH OR PERISH!: SHARING BEST PRACTICES FOR A WRITING INSTRUCTOR-LED 'WRITING FOR PUBLICATIONS' GRADUATE ACADEMIC WRITING COURSE

Abstract

There is an urgent need to teach 'Writing for Publications' classes to graduate and doctoral students. Though the debate about who should instruct such classes continues, the paper proffers best practices for writing instructors to use while teaching them. The paper highlights the need for scholar-participants to opt for modeling as a way to familiarize themselves with disciplinary and journal conventions. The paper expands on the way online peer review workshops could be conducted at milestone points in the semester to elevate and formalize peer reviews, so integral to the publication process. A sample syllabus with week-by-week activity break-up is offered for writing teachers to conduct the class as an interdisciplinary course for all graduate and doctoral students. The chapter was first published with the same title in the *Journal of Critical Studies in Language and Literature*, Volume 1, Issue 2 in July 2020.

Keywords: Writing for Publication, Publish or Perish, Modeling, Online Peer Review

3.1 Introduction

While universities are hotbeds of path-breaking innovation and ground-breaking discoveries, many stories of individual student experimentation and achievement remain untold. This is because student researchers are not coached in writing about their research as well as they are guided in carrying

them out. Since professors in other academic disciplines may not be willing to step into the writing instructor's shoes, it may be expedient if the writing teacher measures up to the challenge of offering instruction to interdisciplinary scholars in writing for publication. The question is often raised: how can a writing teacher who is trained in a specific way of writing for journals cater to scholars from S.T.E.M. (Science-Technology-Engineering-Math) disciplines that follow the I.M.R.A.D. (Introduction-Methodology-Results-Analysis-Discussion) format, and often need the most guidance in writing their papers, since their expertise lies in scientific research rather than argumentative persuasion? This paper takes the perspective that writing instructors can successfully steer "Writing for Publication" courses, and offers practitioner insights and best practices.

3.2 Interdisciplinarity as an Instructional Strategy

Even if students come from different research areas, it may be practical for universities to ask writing teachers to teach 'Writing for Publication' classes, since the purpose of the class is to teach participants how to write about their research for a journal audience. However, this does not imply that writing teachers hold classes at various departments, one department at a time. That 'Writing for Publications' assumes and embraces an interdisciplinary approach is a wholesome best practice for students and the instructor, since, as Woods (2007) rightly points out, "it is in the process of negotiating meaning across disciplines that the rewards lie…" (p. 853). Even if this area of negotiation is under-theorized in academic discourse, it is an incontrovertible fact that interdisciplinarity characterizes the workplace of today. When interdisciplinary learning is accepted as a primary principle of curriculum design, it denotes that the syllabi will incorporate interdisciplinary activities and texts that offer learners opportunities, as Ivanitskaya et al. (2002) term it, "to develop critical thinking and meta-cognitive skills through an understanding of the relations derived from different disciplines" (p. 95). Taking the idea forward, Woods (2007) elaborates that "developing such interdisciplinary know-how is a worthwhile adjunct to disciplinary expertise, and its development has a legitimate place in university curricula. If the intention is to enable students to engage in effective interdisciplinary communication in their future lives, it could be argued that developing the ability in dealing with the complex negotiation of meaning and understanding should be one of the principal aims of interdisciplinary learning at the university" (p. 856). Even though they may be doing it at an advanced level and in a research university setup, 'Writing for Publications' courses contribute consciously to this interdisciplinary

interchange in the same way that Writing Across the Curriculum courses do at the undergraduate level.

Our workplaces are becoming interdisciplinary, where members have to work harmoniously and knowledgeably with coworkers from different disciplines and areas of expertise. When 'Writing for Publications' operates in an interdisciplinary environment, students learn from each other about current research trends and discoveries in other disciplines. This not only generates interesting academic conversations in the classroom, but also gives student-writers insights into how a certain academic event or discovery—such as the discovery of reverse analysis—influences different disciplines and impacts research strategies.

As the course description clarifies that the adopted approach is interdisciplinary, students come in with the knowledge that their work will be read and critiqued by interdisciplinary peers, which includes the instructor, who will be giving them immediate feedback on their communication competence. Since interdisciplinarity is the framework for all collaboration, the dialogs about writing generated between the teacher and the student, and between the student and the peer reviewer are very important to the student's growth as a writer. In addition to the greater interchanges of ideas, the interdisciplinary environment leads to a significant improvement in the clarity and reader-friendliness of the student's writing. Since students know that their writing has to make sense to scholars from other disciplines, they avoid jargon, explain all assumptions, and clarify inferences. Since reader consciousness is central to the progress of any writer, this is a valuable outcome of the course.

Another principle, which a 'Writing for Publications' course pedagogy may want to embrace, is the use of online peer review workshops. Since peer review is a time-consuming process but a necessary exercise in developing critical reading, questioning, and commenting skills that all graduate students in general, and 'Writing for Publications' students in particular, need to master, peer review workshops must be carefully planned, but held online. Careful planning involves creating and having reviewers fill out review forms that posit questions that are at the cognitive level of evaluation. These forms not only offer a review summary, but also aid students in composing helpful reader response notes. Put differently, the peer review questionnaires can be so devised that they help the reviewers develop opinions that they justify in their response pieces. As for the reader response notes, they need to be organized in S.W.S. (Strengths-Weaknesses-Suggestions) format, as is common practice in the scholarly publication community. While composing their reader response notes, students develop their review skills as well as their writing proficiencies.

Using S.W.S. as a suggested guideline ensures that the review essays are structured, comprehensive, and balanced, since highlighting strengths, or what was done right, is as important to the growth of both the writer and the reviewer as the spelling out of weaknesses and the offering of suggestions or how some areas could be improved. While separate peer reviews for content and mechanics need to be planned, peer review forms can be so designed that they double up as self-review checklists that students fill out and attach while submitting their work. Even though peer reviewers may be able to spot inadvertent plagiarism, students must be asked to submit their work through automated plagiarism checkers. After all, research is as much about integrity as it is about innovation and scholarship.

Holding peer review workshops online has advantages that go way beyond convenience and savings on paper and class time. Online workshops help the writers realize the extent and significance of the role of the 'physically absent' peer reviewer in the process of journal publication. The student peer reviewer is not only standing in for the journal reviewer until the article is ready to be sent to the journal, but s/he is also articulating important ideas about the structure, presentation, and the writing mechanics of the paper in the feedback notes. While the peer response essay is an important way to develop critical and evaluative skills in students as readers and writers, they are also the conduits through which interdisciplinary inputs are communicated to the writers in the form of suggestions. Through the reader responses they get, student writers gain a clear idea if they are being understood, and if what is being understood is what they wanted to communicate. What is more, the peer reviewer stands to gain as much as the writer. Not only does the peer reviewer gets to practice writing and critical thinking skills, but s/he also develops a deep awareness of the audience. S/he was the audience of the paper analyzed, and now s/he gets to wear a different hat, as the SWS writer whose audience is the author of the reviewed paper. In learning how to both provide and act on the peer reviews received, course participants grow to realize that writing is a recursive and collaborative, rather than a solitary, process.

At this juncture, it may be worthwhile to discuss what this pedagogical shift to online implies in terms of learning outcomes. It is both undeniable and understandable that peer reviewers' behaviors and comments change when conducting reviews online for three reasons: they have more time to reflect before posting comments, which are there for good, and for all to see. As Jassawalla and Sashittal (2017) point out, when online, "students do exercise a great deal of care in terms of what they say and do while working with others. The higher levels of care trigger both impression management behaviors and perceptions that others are contributing more.

The perceptions that others are contributing more seem instrumental in shaping students' decisions to contribute more themselves" (p. 219). It is perhaps for this reason that Breuch (2004) went so far as to claim that virtual peer review is "remediation of face-to-face peer review," pointing out that both the writer and the peer reviewer exhibit a greater sense of audience consciousness when peer reviews are conducted online (p. 8).

Student-writers apart, the system of holding online peer review workshops holds many advantages for the teachers too. The practice of doing peer review online implies that instructors have a digital record for monitoring the efficacy of their workshop tools, such as the peer review forms. Additionally, it gives the teacher the ability to facilitate multiple or group reviews in the classroom. Multiple peer reviews and group reviews offer students excellent exposure to a range of ideas, suggestions, and perspectives, that is so important to the students' growth as writers. The option to have multiple reviewers is a benefit that is especially critical to the success of 'Writing for Publications' students, since they have to learn both to receive and offer feedback in order to succeed in their publishing careers. The providing of meaningful online interfaces for interaction with peers in these workshops thus becomes the offering of what Liu et al. (2002) term as a foundation for students to evaluate a peer's work in a professional setting, as it makes them realize that reviewing a peer's product is a professional obligation and aid to advancement (824). Also, these interfaces improve the outcome of the class because, as Papadopoulos et al. (2017) correctly point out, "students who provide reviews to their peers ('assessors' or 'givers') reach higher levels of learning gains in comparison to students who typically only receive peer reviews ('assesses' or 'receives')" (p. 71).

Interdisciplinary online peer review workshops are good exercises to stimulate conversation about how research has been presented. Liu et al. (2002) describe how Michigan State University (M.S.U) students, having gone through an interdisciplinary peer workshop, declared that, because of it, they "learned how to explain jargon terminology, learned about structures of the review process, and learned about thinking from other fields." They saw the strengths and the weaknesses of their own papers, such as "forced idea synthesis" or "holes and deficiencies," and got "perspectives on our own progress and quality of results" (p. 827). Even if peer reviewers from other disciplines cannot comment on the validity of specific methods, results, or similar research nuances—only the students' Ph.D. supervisors can do that—the vast majority of students in the M.S.U. study thought that "people outside your discipline clear up jargon and make it more understandable," and even if they were 'non-experts' from different fields, the benefits of such peer reviews far outweigh the time invested (ibid).

Though more explicit connections to peer review theory and practice are necessary to further explore the ramifications of virtual group peer reviews, it is true that even writers who decide not to follow a peer's advice may actually learn as much as writers who follow the advice, because it gives them an opportunity to think their idea through. Importantly, online peer review workshops give all students, as Jensen (2016) interestingly puts it, "the gift of having some responsibility—some authority for their own learning, which empower them as both readers and writers" (p. 2). Their growth and evolution are, therefore, similar to what Nava-Whitehead et al. (2011) describe as the movement by "the novice from the periphery of a community to its center, as he or she becomes more active and engaged within the culture and eventually assumes the role of an expert…" (p. 361). Since many enrolled students seemed to dread writing, Pritchard & Morrow (2017) began to hold online peer workshops as a way to overcome that roadblock, and develop empathy, and "positive attitudes about writing, increased motivation to revise, increased quantity of writing" (p. 8).

3.3 The Modeling Approach

While the value and possibilities of interdisciplinarity cannot be overemphasized, interdisciplinary awareness cannot be developed at the expense of disciplinary expertise. In a course as challenging as 'Writing for Publications,' students need to receive intensive training in mastering disciplinary requirements and journal specifications. Every publication project, hence, every 'Writing for Publications' course, needs to begin with a proposal. In the world of journal writing where approximately about one-fifth of the articles submitted are accepted, the writer who evinces a good understanding of the requirements of the target journal earns a response. While in-class guidance and helpful resources may be required to bolster the students' ability to market their paper to the editors of their preferred publications, what is perhaps most critical is that a way is found to help prospective writers develop an enhanced awareness of disciplinary and audience expectations. Offering modeling exercises where the researcher is asked to identify two exemplary articles from the targeted publication to evolve a guide for his or her own writing could help students develop familiarity with disciplinary and writing conventions, and the expertise to navigate through it. In my 'Writing for Publications' class at Rutgers University, I use two such scholarly article modeling assignments or S.A.M. 1 and 2. If S.A.M. 1 concentrates on the macrostructure, S.A.M.-2 focuses on the microstructure. While students review and take notes on topic sentences, sectional headings, theses, titles, and the flow of one section into

another in S.A.M. 1, they examine and record their observations on the academic phraseology, length of the section, and relationship of one sentence to another in a paragraph, as well as the use of verb-tenses, noun-pronoun and active-passive voice use in S.A.M 2. Through their close reading and note taking from the model articles, students figure out unique ways to present their research. They use S.A.M.1 and 2 to work out their scholarly article plan in ways that are unique while also demonstrating their awareness of disciplinary specifications and target journal's requirements. These patterning assignments are empowering for writing instructors, proving the validity of Ackerman and Perkins's argument (1989) that "interdisciplinary learning augments instead of threatening traditional teaching styles" (p. 79).

        As modeling and planning requires students to think through their presentational styles, modeling is neither derivative nor normative. Modeling does not create limits or set boundaries to a students' scholarly reach, but rather expands and enlarges their awareness. As the students create their own guides and outlines from their scrutiny of model articles, they deliberate on, and choose, what to follow and what not to. As a structure is not arbitrarily imposed on them, the S.A.M. assignments have many benefits. To begin with, students get to realize what Broekhoff (2008) pointed out so eloquently: "No academic writing, quantitative or qualitative, or indeed any kind of writing, can exist in a vacuum" (p. 130). Since "current rhetorical and pedagogical theory posits that all academic writing is in some sense collaborative, involving a process of shared inquiry" (ibid.), the S.A.M. assignments make the students probe into that process of sharing and collaboration. Since students are not asked to emulate, but to improve what they find, they begin bettering what they perceive or pick as the best sample available—often, the authors of the articles are their supervisors or well-known scholars in their field—they develop a critical bent of mind and enter creatively into what is essentially a scholarly conversation with the writers of their model papers. The S.A.M assignments not only make the new scholarly writers scrutinize the argumentative thought process of the authors of their model articles, but they also help them develop the confidence to eke out original pathways in their research and come up with their own unique paper structures and arguments.

        Students move on to detailed 'macro outlining with micro details' after the S.A.M. assignments. Students may, or may not, choose to adhere to the broad framework of the I.M.R.A.D. or Introduction-Methods-Results-Analysis-Discussion template that scientific writing follows, for instance. Students use the knowledge they gained from their examination of the two scholarly articles, as well as their learning from the W.R.E. (Writing and

Revision Exercises) to guide them during the outlining period. The W.R.E.s are mini-lessons, and offer drafting and reviewing practice relating to different elements of the paper: Abstract, Research question, Thesis/ hypothesis, Literature Review/ Theory, Objective/ Overview, Methodology/ Research design, Analysis, Results/ Findings, Discussion/ Significance, and Inferences/ Conclusions. For instance, I coach them to write introductions as inverted pyramids or cones, and compose their article paragraphs in sandwich style, with distinct topic and ending sentences, and research substantiation in between, through W.R.E. mini-lessons and exercises.

The outlining itself is a four-level assignment. S.A.M. 1 aids the student in creating 'macro outlining with micro details –Level 1' which is the sectional outline, as well as 'macro-outlining with micro-details–Level 2', where writers name the subsections under their main sections. S.A.M. 2 guides students in producing 'macro-outlining with micro-details–Level 3' which identifies topic headings under the subsections, as well as 'macro outlining with micro details–Level 4 outline,' where topic sentences for actual paragraphs are planned. At the end of the outlining cycle, I hold the first one-on-one mid-term conference so students can get ready to flesh out their outlines thereafter. The second one-on-one conference is held when students have written out their pre-final drafts. Since students get the best benefit from instructor inputs, feedback, and guidance at these two milestone points of the course, the conferences are scheduled at mid-term, and two weeks before course closing.

3.4 The Feedback Triangle

Post mid-term conference, the course becomes even more writing-intensive. As students write out their drafts in sections, and get feedback from their peers online, they also seek out and obtain research-specific feedback from their dissertation supervisors. Together with the students' peers and supervisors, I, as the writing instructor, form the third vertex of each student's feedback triangle. Not only do I offer student inputs in writing, but also in person at the conferences. My goal in the first conference, which is held around mid-term, is to ensure that the detailed plan I am reviewing with the student leads to clear writing. I identify areas where revision is necessary, together with my student, during the second conference, which is held a couple of weeks before the course ends, when the papers are nearly ready for submission. While both my conference and written feedback focus on students' issues with bridging into academic writing, I must point out that E.L.L. (English language learners) students need extra help and feedback. Given the increasing diversity of student

researchers, it is always safer for 'Writing for Publication' teachers to make no assumptions of what the student knows. Instructors can plan to spend extra time to offer beneficial sources and language help to such learners, in addition to apportioning enough time for scrutinizing each student's model articles, target journal specifications, and disciplinary presentation styles, which may be very different from those of their writing teacher's. Since it helps students develop an awareness of their writing process, it may also be a good idea to both begin and end the class with thoughtful exercises, such as a Writing self-assessment and an end-of-the-course Reflection respectively. As the Writing self-assessment asks students to do a S.W.O.T. (Strengths-Weaknesses-Opportunities-Threats) analysis on their writing skills, it prepares them to set objectives and get the best out of the class. Similarly the last day Reflection assignment encourages students to consolidate their learning from the class, and think about their writing plan for the future. As it may be useful for fellow instructors in planning such a course, I share and explain the syllabus that I used for teaching at Rutgers University in Fall 2018 in the next section.

Syllabus, Assignments, and Calendar

> Writing for Publications, Rutgers University
>
> Mode: Hybrid   Semester: Fall 2018

Course Description

'Writing for Publications' is aimed at graduate students preparing a document for publication. The course offers hands-on training in scientific and scholarly writing for advanced researchers. This course focuses on learning to write and edit at the level appropriate to a journal article in the student's discipline. As this course uses the workshop approach, it requires students to be invested in the work of their class colleagues. Participants do their writing assignments and critique their own work, as well as the work of fellow colleagues, both in and outside class. Two one-on-one conferences with the instructor are offered to discuss publishing project progress.

Close examination of scholarly articles in the student's field is undertaken as it promotes improvement in skills necessary for successful graduate work. As support for the goals of the course, students are asked to bring in current work they may be writing in their graduate courses, or to

revise past work, to explore the critical role revision plays in the writing process.

Course Objectives

This course enables students to learn how:

- ✓ To understand journal publishing processes and adapt writing to the purpose and audience which the journal caters to;
- ✓ To plan the scholarly article [global macro-organization; local micro-organization], identify the content of the different sections and the main point or points, structure arguments, use evidence, write cohesive discussions and persuasive conclusions;
- ✓ Apply writing dimensions [purpose; audience and tone; global organization; local organization; clarity and fluency], to construct clear and coherent paragraphs and effective transitions between sentences and paragraphs of the scholarly article;
- ✓ To develop interdisciplinary competency and be able to communicate the significance of one's work to readers who are not specialists in the area;
- ✓ To understand the rules defining acceptable and unacceptable citations and know how to avoid plagiarism;
- ✓ To evolve as readers and reviewers through providing feedback for other writers in reader response essays through participation in online peer review workshops;
- ✓ To enhance the ability of participants to understand, respond, and revise, according to the reader reports their peers offer them.

Course Assignments

Writing Self-assessment
The Writing self-assessment is a SWOT (Strengths, Weaknesses, Opportunities, Threats) exercise that will help you understand your writing skills. Review comments for improvements and revisions made by your professors over the past year with the purpose of finding your strengths and areas for improvement. State your objectives and complete the form in its entirety. Remember, there is no right or wrong answer.
Pitching the proposal
Name the publication you are targeting and justify why it is your target journal in a note to me. Look inside it for a call for proposals (CFP) and study its submission guidelines. Write a formal letter to the journal describing how your article fits into the journal's area of specialization and/ or call for papers. Explain why the readers of the journal will find value in your article.

Scholarly Article Modeling - SAM 1

The purpose of SAM 1 is to analyze the macro-elements of a model article from your target journal. You will design and use SAM 1 as a resource document and study guide; it will combine your observations on the organization as well as your notes on the language used in the model article. Study the macro-plan and sectional organization of the article and compile examples of sentences or academic phrases with the objective of coming up with your own scholarly writing technique. All details may be found in the assignment instructions.

Scholarly Article Modeling- SAM 2

The purpose of SAM 2 is to help you come up with strategies for the paragraphs you are writing by analyzing the microstructure of the paragraphs of your second model article. Analyzing and taking notes on the logic the author used to present information within it will help you come up with techniques for your own article.

Macro outlining with Micro Details

You have completed your research and believe it is publication worthy. You have identified a journal and pitched your proposal carefully explaining why your paper is a good fit for an upcoming issue. You studied model articles and came up with a modeling guide based on your analysis of it. Now it is time to plan how you will present your research in a paper that is organized in the structure and format that best fits your work. You will arrive at the final version of your outline in four steps. In Macro-outlining with Micro-Details outline 1 and 2, you will plan the various sections and subsections of your article, while in Levels 3 and 4, you will outline the paragraph plan for each section. All details may be found in the instructions document.

The Publishing Project

This is the writing project that you work on throughout this course. You will create paragraphs from your Level 4 outline that is in keeping with the SAM 1 and SAM 2 which emerged from your study of the model article/s. All sections of the publishable paper will be drafted as per the modeling guide and outline you evolved. Whatever your discipline, make sure you have an abstract, list of keywords, and a brief bio to begin with. Also, ensure that you state your thesis/ hypothesis, research design, objective of study, methodology, and theoretical framework at the beginning of your scholarly article. The introductory section of your paper must feature a literature review and article overview. The body of your paper will contain the details of your study and an analysis and discussion of the findings. The concluding section of the paper will highlight the results and the inferences of your study and acknowledge

any help received or known limitations. You will offer a wrap up while indicating the way forward. A list of references or works cited using the citation format that your discipline follows is required.

Reflection

When you finish a class, it is a good idea to take stock of what you have learned and make plans about how you will use that knowledge in the future. For a final assessment of your work in the class, you will present a Reflection PowerPoint where you will offer your thoughts about: 1) whether the interdisciplinary nature of the class and the reader responses provided by your peers from other disciplines made you grow as a writer; 2) whether the new knowledge you gained about how disciplinary expectations were similar and different benefited you as a scholar; 3) how the knowledge you gained from studying target journal requirements and the audience impacted your thinking and writing; and 4) what you learned about writing from each assignment and exercise in the class. In closing, 5) you could share your future writing plans while critically recapitulating the distance you have covered as a writer. You will present your Reflections on the last day of class, the day I return your graded projects.

Peer reviews, Self-Reviews, WRE, Class & Conference Participation

Peer and self-reviews are central to the publishing process. You need to be able to give and accept constructive feedback and suggestions. Hence, we will be going through online peer workshops where you will use peer forms and write 3: 3: 3 SWS reader response notes.

WREs are writing and reviewing exercises that you will complete in order to gain awareness and find strategies on how to draft the various sections of the paper including introduction and conclusion.

Participation in the two mandatory one-on-one conferences with the instructor gives you a chance to know where you stand in the class, obtain clarifications, and get help, inputs, and suggestions for your detailed outline and pre-final publishing project respectively.

You will also be discussing the readings in the syllabus in small and large groups. Regular attendance and participation in all activities are necessary for your success in this class.

Course Readings
Book Chapters

Soule, D.P. (2007). Introducing Writing for Scholarly Journals. In D. P. Soule, et al, (Eds.), *Writing for Scholarly Journals: Publishing in the Arts, Humanities and Social Sciences* (pp. 6-10). Glasgow: e-sharp.

Corbett, J. (2007). Writing the Introduction and Conclusion of a Scholarly
    Article. In D. P. Soule, et al, (Eds.), *Writing for Scholarly Journals:
    Publishing in the Arts, Humanities and Social Sciences* (pp. 4-34).
    Glasgow: e-sharp.
Morton, C. (2007). Submission to Print: Submitting a Paper for Publication
    and the Publication Process. In D. P. Soule, et al, (Eds.), *Writing for
    Scholarly Journals: Publishing in the Arts, Humanities and Social
    Sciences* (pp. 34-43). Glasgow: e-sharp.
Journal Articles
Estrin, H. (1981). How to write for scientific and technical journals. *Journal
    of Business Communication*, *18*(3), 55-58.
Jaeger, R. G., & Toft, C. A. (1998). Writing for scientific journals II: the
    review process. *Herpetologica*, S54-S63.
Toft, C. A., & Jaeger, R. G. (1998). Writing for scientific journals: the
    manuscript. *Herpetologica*, S42-S54.

Course Calendar

Writing for Publications: Class Plan		
Week #	**Classwork**	**Homework & Online**
Week 1	*Welcome, Course introduction, Goals and expectations *Understanding and planning the Publishing Project *Writing self-assessment: Knowing your strengths & weaknesses *About the target journal, CFPs, and model articles * How To Do Macro outlining with Micro Details Plan (contd.): Levels 1 & 2 outlining	*Submit Writing self-assessment in assignment area before Week 2 class *Go through assigned reading *Find CFP in target journal *Find model article/s in the target journal & take notes *Find instructions for authors in target journal and take notes
Week 2	*Reading scholarly articles for content and style: Introducing Scholarly Article Modeling 1 (SAM 1) Assignment *Journal writing process: From proposal to paper-Discussion with Presentation *Writing and reviewing exercises (WRE): Titles *Reviewing Reading 1 (group work)	*Go through assigned reading *Pitching your proposal: Describe how your article fits CFP and provide base plan or Level 1 outline. *Complete SAM 1 assignment and submit before Class 3 *Create Level 2 outline

		*Start working on Pitching the Proposal assignment
Week 3 Online PR Workshop	***Online peer review workshop for Pitching the Proposal**	*Revise proposal after peer review for conference. Edit and submit Pitching the Proposal in assignment area before Week 4 class
Week 4	*How To Do Macro outlining with Micro Details Plan (Contd.): Levels 3 & 4 outlining *Structure of a scholarly paper: Discussion *WRE: Paragraph structure: 'Sandwich Cookies' and 'Cones' *Reviewing Reading 2 (group work)	*Go through assigned reading *Add micro-level details to macro-plan: Level 3 outline
Week 5	*Reviewing Reading 3 (group work) *WRE: Introduction: Research question/ thesis/ hypothesis *WRE exercises: Literature Review/ Theory and Objective/ Overview	*Go through assigned reading *Prepare Level 4 plan *Begin writing introductory paragraphs.
Week 6	*Reviewing Reading 4 (group work) *Reading scholarly articles for content and style: Features of Scholarly articles, Scholarly Article Modeling 2 or SAM 2 *WRE: Methodology/ Research design	*Submit SAM 2 before next class *Work on the research design and methodology section of your publication project (PP) *Complete Level 4 plan and write introductory paragraphs for peer review
Week 7 Online PR Workshop	***Online peer review workshop of Macro-outlining with Micro-details–Level 4 with opening paragraphs**	*Revise plan with opening paragraphs after peer review for conference
Week 7	CONFERENCE # 1 with instructor	*Revise or complete work on Part 1 of your essay containing your introduction and background sections, thesis, literature review, and theory sections based on peer and instructor feedback.

		*Take an appointment with supervisor to discuss outline and introduction
Week 8	*Discussion: Visual representations * WRE: Analysis	*Create visual(s) and submit with part 2 of your writing project *Work on the analysis sections of PP
Week 9	*Discussion: How to approach revision *Review of Writing process and Reflection Assignment * WRE: Results/ Findings and Discussion/ Significance *WRE: Inferences/ Conclusion/ Way Forward	*Work on Part 3 of your paper namely results/ findings and discussion/ significance/ conclusion paragraphs. *If the paper is not complete, offer expanded outline for incomplete sections
Week 10 Online PR Workshop	**Level 1(content): online peer workshop of draft PP. Submit SWS reader responses to peer review partners**	*Revise draft PP based on feedback *Complete unfinished sections
Week 11 Online PR Workshop	**Level 2 (mechanics): online peer review workshop. Submit SWS reader responses to peer review partners**	*Revise PP second draft after peer review.
Week 12	*Thanksgiving break, No class	*Prepare pre-final project for conference
Week 13 Conference	*CONFERENCE # 2 with instructor	*Revise paper according to instructor feedback. *Discuss with supervisor. Revise and submit for peer review
Week 13 Online PR Workshop	**Final Peer and Self review.** **Submit SWS reader responses to peer review partners**	*Submit in assignment area as PP (Final) on Sunday of Week 13 after Turnitin check *Ready your Reflection presentation
Week 15	*Publication projects returned *Reflection Presentations *Class evaluations	*Revise article based on final instructor feedback and submit to advisor *Send to journal after advisor approves final draft

3.5 The Way Forward

While the 'Writing for Publications' syllabus and pedagogy, like all syllabi and pedagogy, will continue to evolve, what is important in the larger context is that a conversation and a consensus is necessary in the discipline about the way forward for such classes. Whether writing teachers, rather than discipline specific practitioners, should teach 'Writing for Publications' courses may continue to be debated. What is undeniable, however, is that there is a need in young researchers for guidance in publishing and finding their niches in the academic world, making it necessary to share best practices for such 'Writing for Publications' courses across research universities globally.

References

Ackerman, D. B., & Perkins, D. N. (1989). Integrating Thinking and Learning Skills Across the Curriculum. In Jacobs, H. (Ed.) *Interdisciplinary Curriculum: Design and Implementation* (pp. 77-95). Alexandria, VA: Association for Curriculum and Development.

Breuch, L. (2004). *Virtual Peer Review: Teaching and Learning about Writing in Online Environments.* New York: State University of New York Press.

Broekhoff, M. (2008). Templates for Academic Writing. *Nawa: Journal of Language & Communication, 2*(2), 129-139.

Corbett, J. (2007). Writing the Introduction and Conclusion of a Scholarly Article, in D. P. Soule, et al, (Eds.), *Writing for Scholarly Journals: Publishing in the Arts, Humanities and Social Sciences* (pp. 4-34). Glasgow: e-sharp.

Estrin, H. (1981). How to Write for Scientific and Technical Journals. *Journal of Business Communication*, *18*(3), 55-58.

Fox, J. A., Baloy, N., & Sens, A. (2014). Mix and Match: Promoting Interdisciplinary Teaching, Learning, and Community through Classroom-Level Partnerships in *Collected Essays on Learning and Teaching*, *7*(2), 142-158.

Huang, J. C. (2017). What do Subject Experts Teach about Writing Research Articles?: An Exploratory Study. *Journal of English for Academic Purposes 25,* 18-29.

Ivanitskaya, L., Clark, D., Montgomery, G. and Primeau, R. (2002). Interdisciplinary Learning: Process and Outcomes. *Innovative Higher Education, 2*(2), 95-111.

Jaeger, R. G., & Toft, C. A. (1998). Writing for Scientific Journals II: the Review Process. *Herpetologica*, S54-S63.

Jassawalla, A. R. & Sashittal, H.C. (2017). What Students Think and Do in Classroom Teams When Peer Evaluations Are Highly Consequential: A Two-Stage Study. *Decision Sciences Journal of Innovative Education 15*(2), 219-247.

Jensen, E. B. (2016). Peer-Review Writing Workshops in College Courses: Students' Perspectives about Online and Classroom based Workshops. *Social Sciences, 5*(4), 72- 89.

Kaspar, W. A. (2017). The Signaling Value of Peer Review. *College & Research Libraries, 78*(5), 564-566.

Liu, J., Pysarchik, D. & Taylor, W. (2002). Peer Review in the Classroom. *AIBS Bulletin, 52*(9), 824-829.

Middlebrook, R. H. (2013). Degree of Hybridity: Peer Review in the Blended Composition Classroom. *Journal of Educational Technology*, *10*(1), 1-9.

Morton, C. (2007). Submission to Print: Submitting a Paper for Publication and the Publication Process. In D. P. Soule, et al, (Eds.), *Writing for Scholarly Journals: Publishing in the Arts, Humanities and Social Sciences* (pp. 34-43). Glasgow: e-sharp.

Nava-Whitehead, S. M., Augusto, K.W. & Gow, J.B. (2011). Bewitching Ideas Influence Learning: An Evaluation of an Interdisciplinary Teaching Experience. *Journal of College Science Teaching 40*(6), 359-67.

Papadopoulos, P. M., Lagkas, T. D., Stavros, N. & Demetriadis, S.N. (2017). Technology-Enhanced Peer Review: Benefits and Implications of Providing Multiple Reviews. *Journal of Educational Technology & Society*, *20*(3), 69-81.

Pritchard, R. J. & Morrow, D. (2017). Comparison of Online and Face-To-Face Peer Review of Writing. *Computers and Composition*, 46, 1- 46.

Soule, D.P. (2007). Introducing Writing for Scholarly Journals. In D. P. Soule, et al, (Eds.), *Writing for Scholarly Journals: Publishing in the Arts, Humanities and Social Sciences* (pp. 6-10). Glasgow: e-sharp.

Toft, C. A., & Jaeger, R. G. (1998). Writing for Scientific Journals: the Manuscript. *Herpetologica*, S42-S54.

Woods, C. (2007). Researching and Developing Interdisciplinary Teaching: Towards a Conceptual Framework for Classroom Communication. *Higher Education 54*(6), 853-866.

PART TWO:

FACILITATING ONLINE DISCUSSIONS, INCORPORATING DIGITAL MULTIMEDIA ASSETS, AND USING VISUAL TOOLS

Chapter Four

A Learner Centered Pedagogy to Facilitate and Grade Online Discussions in Writing Courses

Abstract

The teacher, whether teaching onsite, online, or in a blended format, needs to use discussion and learning management spaces for instructional purposes. Moving class discussions up Bloom's taxonomy scale is an index of a teacher's success in steering the discussion, such that it realizes the cognitive goals set up for his or her course. Since the discussion area on a learning management system is the space where class interaction and the teaching and learning happen, Chapter Four offers tools and methods to instructors to assess discussions and information flow not only between the teacher and the students, but also between the student and other students, and the students and the teacher. The creation of threads and trees as visible and measurable indicators are discussed, even as rubrics are offered for use. Screenshots from learning management systems used in classes at various American universities are utilized in the chapter to demonstrate the use of the discussion pedagogy outlined in the article. The chapter was first published in *Writing and Pedagogy*, Volume 5, Issue 2 in 2014 with the same title.

Keywords: Bloom's taxonomy, Discussion Facilitation, Write Posts, Wrong Posts

4.1 The New Challenges

The challenges of teaching writing are multiplied exponentially when the teaching of writing is done in an online medium. With the changing profile of students, and the way they choose to learn, teaching scenarios and approaches in writing courses need to be modified, if not transformed. A new pedagogy is required in both onsite and online writing

classrooms, more so in the latter, since the challenges of delivering and accomplishing course objectives in a web environment are far more complex than within the four walls of a face-to-face classroom. Nowhere is the gap more pronounced than in the online discussion area that is, or can be, an equivalent to classroom exchanges of ideas and information. However, this does not have to be so. A pedagogy can be developed that is responsive to the needs of the online student, and cognizant of both the possibilities and the constraints of the internet classroom. In the context of such a responsive pedagogy, the discussion area can become both vibrant and energizing, and most importantly, a tool for learning and for the mastering of course objectives. In what follows, I explore how an instructor posting pool based on cognitive levels can be designed so it leads to the creation of multiple threads and a discussion tree that can nurture writing outcomes and the written capabilities of students. Within this exploration, I present the salient features and outcomes of a new, taxonomy-based, learner-centered discussion management pedagogy that can be used across levels and learning management systems.

4.2 The New Online Learner

What is the profile of the new online learner? Is s/he the modern face of the independent, reclusive, self-motivated, disciplined, and goal-oriented adult distance learner of the pre-1990s? Or is the new e-learner, as Nada Dabbagh (2007) profiles her/ him, a completely different person who, unlike the distance learner, is "affiliation oriented," "networking oriented," and "collaboration seeking" (p. 217), and who, even if proficient in negotiating through the internet, needs direction and help in using e-learning systems to her/ his learning advantage? Agreeing with Dabbagh's profile of the online learner, Rena M. Palloff and Keith Pratt (2003) warn that, "should faculty not take the responsibility to build a scholarly community, the learner will flounder" (p. xvii), adding that, "this need to belong to a community in the e-learner transcends disciplines and geographies" (ibid). While it is true that the online student is getting younger—this group is increasingly made of 'generation nexters' (born 1980-2000) rather than Generation Xers (born 1960-1980)—this learner profile does not imply that an online class is, therefore, less diverse than its onsite counterpart. As returning adult students are increasingly registering for online classes, taking advantage of the 'anywhere anytime' features of online education that make it possible for them to complete their studies even as they continue working, online class takers are fairly age-diverse. According to the National Center for Education Statistics (2011), 30% of those aged 30 and

over who returned to college opted for online courses (p. 10). In addition to being age-diverse, members of an online class are also geographically spread out, since students can now register in their preferred universities without having to relocate to do so. What brings, and keeps, the new and diverse online classroom and learners together is technology. As Bruce Kingma and Kathleen Schisa (2008) put it, "technology, when used appropriately and effectively, can expand the reach of talented faculty, and provide geographically-bound students with access to highly regarded academic programs. It may also enable instructors to enrich course content with multimedia materials […], and it allows instructors to encourage ongoing discussions in the online forum that extend far beyond the constraints of a single face-to face class meeting" (p. 2).

There is no denying that transformation in the profile of online students and the nature of the online classroom has immense implications on teaching roles and responsibilities. A different kind of teacher, or at least a teacher who understands technology and is sensitive to her/ his new function, is required. Katarina Pisutova-Gerber and Jana Maloviccova (2009) discuss the obligation of online teachers to break out of authoritarian teaching traditions, declaring that "the success of the teaching approach and the pedagogy of the course depend upon the enthusiasm of the teacher" (p. 38), while lamenting that only a few courses and teachers "attempt a truly student-centered collaborative approach" (ibid). Taking the point further, Rita Kop, Helen Fournier, and John Sui Fai Mak (2011), profile the new online teacher to be thus:

> The new roles that the teacher as facilitator needs to adopt in networked learning environments include aggregating, curating, amplifying, molding, and persistently being present in coaching or mentoring. The facilitator also needs to be dynamic and change throughout the course. Scaling up to the majority in networked learning requires facilitators to adopt a multifaceted role, so as to guide or influence the learners and communities to get involved and embrace social media practices. The significant role of knowledgeable others or other learners is to share part or all of the roles of the facilitator and support other learners by taking an active, participative, and critical role in connectivist learning by communicating, sharing, cooperating, collaborating with, and providing feedback to each other in the communities or network. (p 89)

More demands on the online writing teacher do not translate to more control. Rather, the online teacher has to be able to break out of the hierarchal structure of the face-to-face classroom. The asynchronous feature of online learning promotes the leveling of the teaching/ learning structure since the students are no longer obligated to be in the classroom, where and

when the teacher is. By bringing in new influences that include social media, the writing teacher opts for a freer design of the learning space that may run counter to the traditional impulse to allow a unidirectional flow of information. Ruth Reynard (2009) pictorially represents the change in Figures 1a and 1b, and she celebrates the online classroom for placing "instruction first...[and making the learners] totally *open* to the influence of the learning process and the *dynamics of direct communication and interaction*" (paragraph 14).
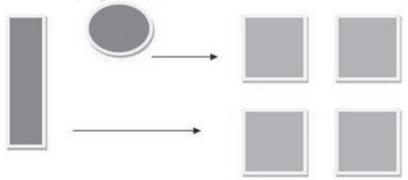

Figure 1a: Traditional Classroom
Figure 1a. Source: Designing Learning Spaces for Instruction, not Control (Reynard 2009)

Figure 1a is meant to depict a unidirectional flow of information (as shown in the direction of the arrow) from the teacher (represented by the oval) and podium (designated by the long rectangle) to the students (denoted by the rectangles). Figure 1b, on the other hand, depicts the multidirectional flow of information indicated by two-way arrows from the teacher (the oval) to the students (the rectangles) and also between the students themselves. The teacher is now in the center of the open classroom. 'Open' in this context does not signify chaos; similarly, relinquishment of control does not mean the erasure of the teacher's presence in e-discussions.
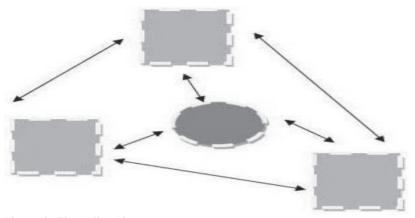
Figure 1b. The Online Classroom
Figure 1b, Source: Designing Learning Spaces for Instruction, not Control
(Reynard 2009)

When the new profile of the online learner, as well as the potential and
challenges of the medium are not understood, immense learning
opportunities are lost. Both teachers and students are expected to read and
compose meaningful responses if an online discussion is to help the class
achieve the learning objectives that have been identified for the course.
While learning objectives are set for the entire writing course, and feature
in the syllabus, learning objectives for a discussion are often subsets of the
learning objectives for the course. Trevor Kerry (2002) defines learning
objectives as "quite simply, the answers to this question: at the end of this
lesson/ session/ term/ year [and discussion], what do I want my students to
know, to do, or to understand, which will take their learning on from where
it is now?" (p. 1), adding that objectives "are short-term, immediate, and
rapidly testable" (ibid). When the class accomplishes the learning objective,
it becomes a learning outcome. If objectives are intended results, then
outcomes are the achieved results. Put differently, learning objectives,
which are teacher-oriented and which structure the instruction, get
translated into learning outcomes that measure what the student has learned,
and are, by definition, student-centered. Agreeing with Kerry's characterization
of outcomes but studying it in the context of discussions, San B. Eom, H.
Joseph Wen, and Nicholas Ashill (2006), call attention to the correlation
between higher levels of instructor facilitation in discussions, and "higher
levels of student agreement that the learning outcomes of online courses are
equal to or better than in face-to-face courses" (p. 218).

According to a study by Abiie H. Brown and Tim D. Green (2009), a student "requires about an hour a week of reading time" to "participate in an online, asynchronous discussion and [...a little] under two hours to compose initial messages and responses to the discussion prompt" (p. 54). When students do not feel encouraged or inspired to reserve this time for discussions, they post less and less, and they do so in a less timely manner. They either do not respond to peer or add-on instructor posts (if any), or worse, they just repeat or copy what others have said. In such cases, grammatical mistakes and I.M. (instant messaging) short forms abound, and the discussion stagnates. Instead of the discussion area providing an opportunity to improve writing skills and promote class bonding, the discussion leads to deterioration or dilution of writing standards and class unity.

Like online writing teachers, who, while grading student participation in discussions, ask how little is too little, online writing students have their own complaints and concerns. Charging teachers for not really participating, students go so far as to say that "the conferences [or discussions] were not helping them…" (Students quoted in study in Rourke and Anderson 2002, 5). Discussions become just another 'lonesome' assignment that they have to complete, and they grudge the extra time they have to give to it. Claiming that teachers do not really read their posts, students express their frustration at the arbitrary nature of the grading of online discussions. Agreeing that the discussion ends up stagnating instead of growing, students lament the lack of student-student or student-teacher interaction that they experience in a face-to-face classroom. When teacher-student or student-student interaction do not happen, the discussion stays horizontal, as in a Facebook page where all posts stay at the same physical position on the screen. When initial posters and responders are posting from the same point on the web page, there is no movement outward, and it is unclear whether a responder is answering the first poster, or is reacting to the responses that came thereafter. Pictorially, the page will look like the screenshot below, making it possible for a vertical line/ arrow to be drawn joining all the points from where each post began.

Figure 2. Screenshot of a Facebook Discussion Forum
(Retrieved on 15 March 2013 from https://www.facebook.com/ForumForPages)

While it may be acceptable if there is no discernible interaction between responders in a social media forum, it is not so in an academic environment. Since writing courses require collaboration, it is important that posters respond to each other as much as to the teacher's question/s in the discussion area, and that the interaction is both visible and tangible.

4.3 Towards a New Online Discussion Pedagogy

This need to generate interaction brings up many questions, the answers to which can lead to a new kind of online discussion management pedagogy. How can life be breathed into the online class discussion, so it does not look like, or become, a sort of Facebook forum? What could a new discussion pedagogy offer to alleviate concerns of teachers and students of writing? How can online discussions provide the cooperative, interactive experience that the new generation of e-learners crave? How can the learning and participation in online discussion be quantified, measured, and mapped? How may online discussions be planned and threaded, facilitated and graded, so they become the parallel of live class discussions and not just another static assignment?

A chorus of critical and academic voices point out that learner-centeredness can be a possible solution. For instance, as Mary E. Huba & Jann E. Freed (2000) highlight:

> In learner-centered teaching, students reflect on what they learn and how they learn. Reflection is a powerful activity for helping professors and students understand the present learning environment and think of ways to improve it. (p. 33)

Since the writing process is recursive, the point made about reflection is especially pertinent. Kop et al. (2011) take Huba and Freed's learner-centered argument forward by observing that, "meaningful learning occurs if social and teaching presence forms the basis of design, facilitation, and direction of the cognitive process for the realization of personally meaningful and educationally worthwhile learning outcomes" (93). The impact of learner-centeredness in discussion pedagogy is underscored by Signum Bisenbach-Lucas (2004), who declares that, to succeed, instructors need to think of fostering learners' "positive interdependence" as well as ways to promote collaborative learning while facilitating web discussions (p. 161). As collaboration is essential to success in writing classrooms, a learner-centered discussion pedagogy that promotes constructive interdependence can make a significant difference to learning outcomes.

4.4 The W.R.I.T.E. and W.R.O.N.G. of Pools

The way learner-centeredness can be incorporated in the posts of writing instructors is embodied in the W.R.I.T.E. and W.R.O.N.G. theory that John DeNigris and Arnie Witchel speak of in their book, *How to Teach and Train Online* (2000). DeNigris and Witchel (2000) urge online teachers to incorporate W.R.I.T.E., or Warm, Responsive, Inquisitive, Tentative, Empathetic qualities in their posts, in place of W.R.O.N.G., or Wordy, Repetitive, Offensive, Negative, Gossipy, attributes (p. 15). Figure 3 on the next page offers a screenshot of a sample W.R.I.T.E. post used in an online project writing class at Rutgers University. Note the warm, inquisitive, and tentative tone of the post, which spurs students to think and respond.

Here is a sample W.R.O.N.G. post trying to achieve the same end, which is estimating the extent of the problem identified, but not really succeeding because of the way the post is written:

> Did you look at the L.B.H.T.Q. project sample? Do you think that the writer is gay? Is that why he says "This behavior is often viewed as a deviation from the sexual norm, but it is nonetheless a deviation that a large population practices, both in the general public and at the University. Homosexuality is taboo in many cultures; and in more liberal areas, it is a condition that is not always accepted with open arms. There is resistance to acceptance from those who believe homosexuality is a sinful act or a psychological disease that must be treated. Regardless, there remains a population that prefers the sexual and relational company of members of the same sex." Do you think the writer belongs to the gay community? Does the project remind you of a recent cyber-bullying incident that made state and national headlines? How big do you think that group is at the university? (From the e-classroom)

The gossipy tone, and the over-informative and wordy nature of the post is likely to confuse or worry the student and take the discussion in the wrong direction. Such W.R.O.N.G. posts do not help the student to perform the task on hand and need to be avoided.
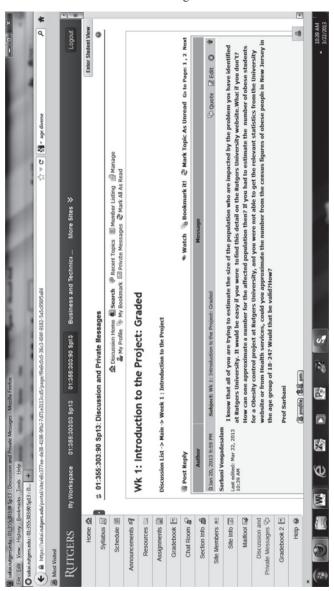
Figure 3. Screenshot of a W.R.I.T.E. POST in an online "Writing for the Business
and the Professions" e-class at Rutgers University
(Retrieved on 15 May 2013 from https://sakai.rutgers.edu/)

One opening post–even if it is a W.R.I.T.E. post–is not adequate to make the discussion a way to help the class achieve mastery of a learning objective. If the online discussion is to be like its onsite counterpart, writing instructors may find it necessary to post multiple times during the span of the discussion, as well as to plan each post well. As multiple, substantive posts from the teacher elicit multiple posts and substantive participation from students, instructors may want to prepare a W.R.I.T.E. post pool to use during discussions. Systematic posting from such a pool promotes student-teacher and student-student exchanges. Also, when instructors post methodically from a previously prepared pool, students find a new instructor post to respond to when they come online and therefore they never run out of having something different to say. Posing sub-questions in follow-up W.R.I.T.E. posts keeps students' interest in the discussion alive even as it produces the feeling of belonging that the online student craves. The teacher knows that the post pool is creating student-to-student interaction when threading happens.

4.5 When Pools make Threads and Trees

Threading happens when participants post asynchronously in response to a topic they find interesting. A discussion can have several threads if there are several subtopics. Figures 4 and 5 show how a single thread looks on eCollege and Sakai, two widely used learning management systems:

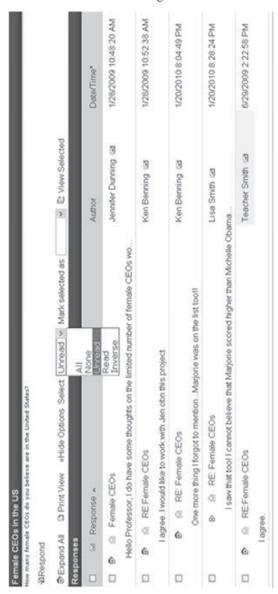Figure 4. eCollege Threaded Discussion View
(Retrieved on 15 May 2013)

Figure 5. Sakai Threaded Discussion View
(Retrieved on 15 May 2013 from Slide 17 of "Presentation Materials" from
https://confluence.sakaiproject.org/pages/viewpage.action?pageId=40501389)

In the words of T. DeVere Wolsey (2004),

> In a face-to-face discussion in the classroom, students must wait their turn to speak and do not have time for reflection; in the asynchronous environment of the TDG [threaded discussion groups], students are free to explore the literature, their peers' responses, and their own experiences as they contribute to the discussion. (paragraph 2)

Students in threaded discussion groups get to converse in writing in clusters that form naturally because of similar interests and similar lines of thinking.

The formation of such threaded discussion groups, and threading in general, is a positive development for online discussions. Since a diverse mix of students is present in the online classroom (as in its onsite counterpart), students, who are interested in a particular aspect of the main question, or in sub-questions that the teacher posts, branch into one or many mini-discussions that the facilitator can monitor, push forward, and participate in simultaneously. Put differently, single long threads and also multiple threads, can crop up in the discussion area. Since they are a visible embodiment or manifestation of the divergent and convergent thinking that is taking place, threads enable both teachers and students to witness and participate in the movement and dynamics of the thought and discussion processes. Also, when threading happens, the discussion moves from the vertical to the horizontal, and to the creation of branches, as can be seen in Figure 7, in contrast to Figure 6:
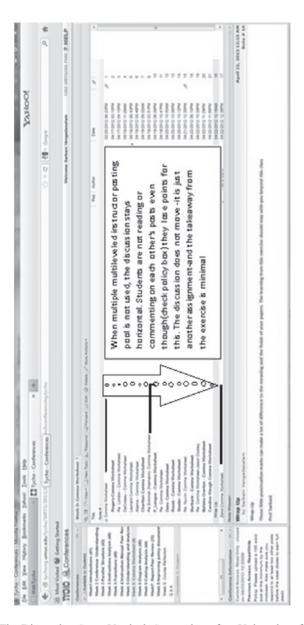
Figure 6. The Discussion Stays Vertical: Screenshot of an University of Maryland University College(UMUC) Writing E-classroom that uses the old pedagogy (Retrieved on 15 May 2013)
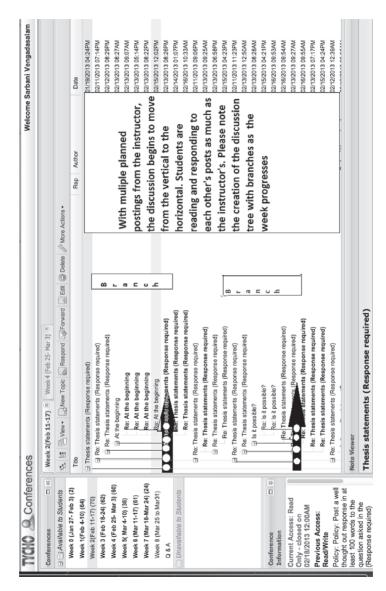
Figure 7. Moving From Vertical To Horizontal - The Visible Difference: Screenshot
of a UMUC Writing e-Classroom that Uses the New Pedagogy
(Retrieved on 15 May 2013)

A horizontal line can be drawn joining the points at which each responding post begins in Figure 7. This is quite unlike Figure 6, where all responding posts begin at the same point, making it a vertical plotting, with no possibility of branching. Since branching occurs within the main discussion in Figure 7, peer-to-peer interaction is accomplished and can be visibly recognized.

Since branching and threading have favorable implications, they should be encouraged. However, if the learning objective, or objectives, that the teacher singles out for a particular discussion are to be realized and transformed into outcomes, it may not be enough for discussion to move from the vertical to the horizontal. The discussion also needs to move to a certain cognitive goal. In other words, even if the horizontal movement of the discussion through the use of multiple and sustained posting is promising, it can never take the place of substantiveness. Palloff and Pratt (2003) focus on the need for teachers to be specific about what constitutes a substantive post:

> A post is considered a substantive contribution to the discussion wherein a student either comments on other posts or begins a new topic. Posts like "good job", "I agree", or "I like the way you think", are important for the community building process, but students must be instructed that these are not considered substantive posts. (p. 9)

The same applies for teacher postings, as students are quick to understand. As Liam Rourke and Terry Anderson (2002) point out about the peer-led online discussions they studied:

> When asked to describe exactly what they had learned from the online discussions, the students were careful to distinguish between lower-order and higher-order cognitive objectives. "The first part of the course", one student explained, "was very technical. I think the online discussion was probably useless in terms of helping me to learn. The only way to learn that kind of stuff is to memorize it". On higher order objectives, however, their opinion was quite different: "When you're dealing with knowledge, with real *learning*, that's about applying a concept: it's about applying an idea to a situation. When that's the case, the online discussion becomes very valuable." (p. 12)

The point made about higher-order objectives suggests that the new learner-centered discussion management pedagogy might aim not just to encourage multiple, and sustained posting by both teachers and students, but also to push the discussion upwards on the knowledge scale. As Susan E Edelstein and Jason Edwards (2002) describe it, "Just as the architect will design a

blueprint to provide the homebuilder direction in completing the house, the facilitator must design and manage the threaded discussion to direct students in achieving the intended learning outcomes" (paragraph 7). In order to create a discussion tree that moves upward cognitively, online instructors will need to post questions at differing taxonomy levels as the discussion progresses.

4.6 The Taxonomy of the Pedagogy

What is a cognitive or taxonomy level? In Part II of his book, *Taxonomy of Educational Objectives* (1956), educational psychologist. Benjamin Bloom, offers a system of cognitive levels and taxonomic hierarchies. As Bloom's theory of mastery learning provides a structure to learning and to measuring capability, it can be used as a framework for the classification of the objectives and the measurement of outcomes of the new discussion management pedagogy. It may be a good idea to explore the taxonomy levels before examining how they could be linked to the creation of a leveled W.R.I.T.E. (DeNigris and Witchel, 2000) instructor post pool, that, in turn, leads to threading, and the creation of a leveled and branched discussion tree.

From lower to higher order, the six cognitive levels of teaching and testing that Bloom identified are: knowledge, comprehension, application, analysis, synthesis, and evaluation. Bloom posited that the operations at one cognitive level in a hierarchy subsume all those that precede it. For instance, knowledge which is at the first level on the cognitive scale is a prerequisite for learning at levels 2 to 6. A discussion of what each of these levels involves follows.

Knowledge, as Bloom (1956) defines it, is the ability to remember or recall what was learnt before, and is at the lowest level of the cognitive scale. At this level, the student is "able to remember and either cite or recognize" facts and materials, theories and concepts, information and ideas (p. 78). "Terms may be given and their definitions requested, or the definitions may be given and the students merely asked to recall or recognize the appropriate terms" (p. 97). This recognition could include patterns, processes, and structures. The objective at this level is to test or develop the student's ability to define, describe, identify, label, list, name, recite, identify (ibid) and so on.

At the *comprehension* level as per Bloom (1956), students are expected to have moved from mere remembering to comprehending and interpreting, and transferring or translating the material from one form to another (p. 106). With comprehension, a learner must not only have

knowledge, but must also understand what s/he knows. Going a step beyond remembering material, the learning objective that is developed and tested at this cognitive level is the learner's ability to explain, convert, paraphrase, defend, rewrite, restate, or interrelate (ibid). Testing strategies at this level use activities and questions, as well as events and ideas that are similar to, but not the same as, the instructional material that was used at the teaching stage.

The two middle-order cognitive levels in Bloom's taxonomy scale are application and analysis. At the *application* level, a student is able to use what was learned in a fresh or different situation. Bloom (1956) clarifies that "the valuation of the extent to which the application outcomes are being achieved becomes one of the most important aspects of the entire evaluation process" (p. 123). Since a learner cannot be said to have understood an idea or principle if s/he cannot apply it to a new situation, questions and teaching strategies at this level develop and test the student's capability in applying the rules, methods, concepts, principles, laws, and theories that s/he knows of and comprehends. Examples of action verbs used for expressing this learning outcome are compute, demonstrate, discover, prepare, produce, solve, and use (ibid).

Analysis is the level that follows the mastery of the application level. Analysis, as per Bloom (1956), refers to the capacity or capability of the learner to "break down the material into its constituent parts and detect the relationships of the parts and of the way they are organized" (p. 145). A student who has mastered this level is able to "make explicit the relationships among the elements, and determine their connections and interactions" (ibid). The learning outcome here is at a higher intellectual level than comprehension and application, because it requires an understanding of both the content and the structural form of the material. The action verbs associated with this level are classify, categorize, differentiate, break down, discriminate, distinguish, subdivide, separate, and subdivide (ibid).

The two higher-order levels that follow the mastery of the middle-order category are synthesis and evaluation. *Synthesis* is "the putting together of elements and parts so as to form a whole" (p. 162). Learning outcomes in this area emphasize the formulation of new patterns of structures by encouraging students to combine elements and parts that may be familiar into "a pattern or structure that was not clearly there before" (ibid). The activities may be as varied as "the production of a unique communication (theme or speech), a plan of operation (research proposal), or a set of abstract relations (scheme for classifying information)" (ibid). The action verbs for expressing this learning outcome include compile,

compose, create, devise, design, generate, invent, modify, organize, plan, design (ibid) and so on.

Evaluation, as per Bloom (1956), is at the highest end of the cognitive scale. It is the sixth taxonomic level and is concerned with the ability to make "judgments about the value, for some purpose, of ideas, works, solution, methods, material, etc." based on standards and criteria (p. 185). The judgments may be quantitative or qualitative, or may be based on internal or external criteria (ibid). The student may determine the criteria, or be given them. Learning outcomes in this area are highest in the cognitive hierarchy, because they contain elements of all of the other categories, in addition to the ability to make conscious value judgments based on clearly defined criteria. The action verbs for expressing this learning outcome are criticize, evaluate, judge, appraise, compare and justify (ibid).

Here is a pictorial representation of Bloom's taxonomy objectives and cognitive levels, in what is described as Bloom's taxonomy rose:
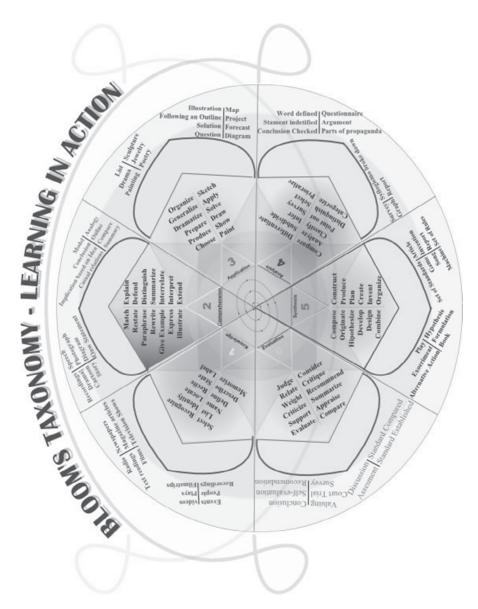
Figure 8. Bloom's Taxonomy: Learning in Action
(Website of Roosevelt Senior High School, retrieved on 15 March 2013 from (http://rooseveltlausd.org/ourpages/auto/2008/3/10/1205207614776/Blooms-Taxonomy-Rose.pdf?rn=9069977.)

Should an online writing course facilitator wish to develop a W.R.I.T.E. post pool (DeNigris and Witchell, 2000), based on Bloom's (1956) taxonomy levels, with the purpose of pushing the discussion up on the cognitive scale, s/he may find it useful to have a list of keywords that match each of the taxonomic levels described above. The University of North Carolina Charlotte's inventory of cue question words offers a useful model (University of North Carolina, Charlotte, 2012) .When deploying the predesigned multileveled posting pool of W.R.I.T.E. posts, an instructor may want to use lower-order knowledge-level and comprehension-level open-ended questions to initiate the discussion. Middle-order application-level and analysis-level queries that link the discussion with course objectives or assignments could be asked around the halfway point of the discussion period, while higher-order synthesis and evaluation level posts that encourage review or evaluation of the discussion outcome may be posed to wrap up the discussion. Below is a sample post pool featuring posts that integrate Bloom's (1956) taxonomy with DeNigris and Witchel's (2000) W.R.I.T.E characteristics on the important subject of plagiarism, which could be included, if desired, in any online course in which students have to do source-based writing. The pool was used for a week-long discussion on plagiarism in a Technical Writing course at DeVry University:

DISCUSSION TOPIC: PLAGIARISM DURATION: 1 WEEK	SAMPLE: BLOOM'S TAXONOMY BASED INSTRUCTOR 'WRITE' POST POOL
Instructions to students	To earn full discussion credit, you may want to post once on every other day of the week in response to questions from each distinguishable category, adding to three in all. Make sure that your posts are 100 words long and that you reference a classmate's response in at least one of your posts.
Day 1, Opening post Taxonomy level: Knowledge	*What is plagiarism? Even as you try defining it, can you explain what is so bad about plagiarism?*
Day 2, Post 2 Taxonomy level: Knowledge	*You correctly bring up the point about the need to give credit when it is due. Read on to know about the consequences of not doing that and thereby committing plagiarism:*

Day 5, Post 7 *Taxonomy level:* *Analysis*	*When you are writing an essay, most of the words in the essay should be your own words, and most of the ideas in the essay should also be your own ideas. Did Assignment 1 have any relevance to our ability to avoid plagiarism? Can you identify the reasons why?* *Common knowledge is anything you could easily find in five or more sources. Common knowledge, unlike other references, does not require in-text citation or an entry on the References page. So, for example, if I were writing about American history and I needed to find the date of American Independence, I would not have to cite the source where I got that information. I couldn't use what they said word-for-word—that would be stylistic plagiarism—but the information about the date of American Independence found through my library or internet search is clearly common knowledge.* *To respect copyright issues and avoid plagiarism you need to be familiar with, and use, APA documentation whenever you cite. We will be discussing plagiarism and APA documentation further in another discussion. So, does common knowledge have to be referenced? Can you now make a distinction between common knowledge and that which is not considered common knowledge?*
Day 5, Post 8 **Taxonomy level:** **Synthesis**	**Giving credit where credit is due is extremely important. This week, we have reviewed plagiarism and copyright considerations. This is a way to protect both your ideas and the ideas of others.** **Visit http://turnitin.com/n_us/blog. Listen to the video recording there. What did you learn from it about ways to avoid plagiarism? What more can be or needs to be done to minimize plagiarism?**
Day 5, Post 9 **Taxonomy level:** **Evaluation**	**WRAP UP** **Thank you for your posts this week. We should now have a good understanding of what plagiarism is, how to avoid it, and what happens if anyone is caught doing it. As we conclude this week, evaluate what you learnt and post any tips that you may have for your classmates.**

Figure 9. Sample Post Pool for Discussion on Plagiarism

Please note that two levels have been combined into one category in the sample pool, distinguishable by font type used. As students need to respond

to one question each from the lower, middle, and higher-order categories, according to instructions, it may be a good idea to use color to easily distinguish between the three broad taxonomic groups. Since the color option is not available in this book, differing font faces have been used in the sample pool for differentiation purposes. Please note that only two questions in the higher order category feature in the pool, as compared to the two questions in each of the middle and lower taxonomic levels. This is because questions asked at the synthesis and evaluation levels make a higher demand of time from students attempting to answer them.

Designing a post pool that incorporates Bloom's taxonomy (1956) to DeNigris and Witchell's W.R.I.T.E (2000) posts may need to be done before class begins, since writing instructors will need to carefully plan out the discussion so the leveled posts help the class achieve specific writing course objectives. Having such a leveled post pool ready saves the instructor time when class is in progress, as s/he will only need to make minor changes to the questions while posting them to the discussion in a particular class. Having a pool customized to course objectives and needs of the writing courses ahead of time does not stifle creativity or growth, but instead achieves the opposite, since instructors will find themselves constantly improving their post pools by weighing in on the student responses and show of interest to each of their posts. Such in-process adjustments will result in the outcomes of the discussion improving every time the same course is taught. Since the use of a taxonomy-leveled post pool pushes students to rise up to the challenge to think harder and go deeper into a topic as the discussion progresses, a discussion tree that moves upward on the cognitive scale will result. There will also be a perceptible increase in peer interaction, as can be seen in the Figure 10 screenshot, where every student is responding to the student who posted before as they attempt to answer the progessively complex questions posed by the instructor. In Figure 10, each student is reading and responding to the post by the student who posted before. The horizontal movement of the discussion is also clearly observable.

Figure 10. Screenshot of an e-classroom at DeVry University[3] Using Taxonomy Leveled Posts.

4.7 The Grading Rubric

The pool will consistently create threads and trees that can aid in the realization of course objectives only if clearly conceived discussion evaluation criteria are tied to it. In the words of Brent Muirhead (2002), "A holistic view of evaluation will consider it as a vital part of the entire teaching and learning process" (p. 60). The use of rubrics promotes effective evaluation procedures by reducing subjective grading and offering student-relevant information on their academic performance. Huba and Freed (2000) point out how rubrics "represent a way of evaluating student achievement that is radically different from the methods we have used in the past. However, shifting from the teacher-centered courses to learner-centered courses is a change of culture that, at times, requires drastic modifications in the way fundamental activities are carried out" (p. 166). The point that Huba and Freed (2000) make here about making rubrics learner-centered is particularly relevant to online discussion grading.

Aware of the need for a rubric to assess student participation in discussions, in particular, Edelstein and Edwards (2002) came up with a discussion-specific rubric with five parameters, as follows:

Promptness and Initiative	4	2	3
Delivery of Post	4	2	3
Relevance of Post	4	3	1
Expression within the Post	4	3	2
Contribution to the LC [Learning Community]	4	3	1
TOTAL	16	13	10

Figure 11: Rubric of Edelstein and Edwards (2002, paragraph 22)

Although the rubric focuses on content, it does not encourage or assess progression. In fact, it does not have a category for progression at all. Joram Ngwenya, David Annand, and Eric Wang (2009) offer a discussion rubric of their own that identifies attendance as one of the four parameters that it seeks to promote and evaluate:

Criterion	Weight
Attendance	10%
Participation	20%
Articulation	30%
Relevance	40%
TOTAL	100

Figure 12: Rubric of Ngwenya, Annand, and Wang (2009, 32)

Attendance is given its due importance in this rubric. However, this rubric does not encourage or push a student towards moving up the knowledge scale. This is where the need for a progression-based cognitive rubric comes in.

Let us closely examine a progression-based cognitive rubric evolved by the present author (Figure 11). It can be used to promote and evaluate discussions in basic to advanced, online or hybrid, undergraduate or graduate writing classes, at technical, general, and research instititions. Though Rutgers University uses Sakai, the University of Maryland College uses WebTycho, and DeVry University uses eCollege as their learning management system at the time of writing this article, yet the author was able to apply the elements of the new teaching pedagogy in all cases. Whatever the target population a university or college may be aiming for, or whatever the distinctive features of the learning management system they utilize, the taxonomy-based W.R.I.T.E. pool and rubric that is proposed here can be used across online writing classes.

GRADING RUBRIC FOR DISCUSSIONS				
Note: The font typeface for the 3 taxonomic categories is the same in pool & rubric	HIGH	MEDIUM	LOW	UNSATISFACTORY
ARTICULATION 10 points with 1 point for responding or referring to peer post Note: *: Times (multiplication) ±: Plus or minus max: maximum	All three posts are about 100 words or 5 sentences long (3*3), at least one refers to a peer post (±1) (9/10 pts max)	*Posts are about 75 words long (3 *2) ± 1 pt. for referring or not referring to a peer post (6/7 pts max)*	*Posts are about 50 words long (3 *1) ± 1 for referring or not referring to a peer post (3/4 pt max)*	One liners or posts less than 25 words long (3*0.5)±1 for referring or not referring to a peer post (1–2.5 pts max)
PROGRESSION 30 pts for answering 1 question each from the 3 categories Code: Italics: Knowledge and Comprehension Bold Italics: Application and Analysis Bold: Synthesis and Evaluation	Posts respond to one italicized (5 pts), one bold italics (10 pts), and one bold coded (15 pts) question each (30 pts max)	*Posts respond to two or more italicized(5 pts) & bold italics (10 pts) question combinations or two or more only italicized or only bold coded questions (20/25 pts max)*	*Posts respond to 1–3 italicized (5 pts each) questions only (15 pts max)*	Posts have no relevance to the questions (1–3 pts each)
REGULARITY 10 points with *1 pt for posting by day 2* Assumption: Discussion duration of 1 week	Three times, every other day of the week (9/10 pts max)	*Twice, every other day of the week (6/7 pts max)*	*2-3 times, but not every other day of the week (4/5 pts max)*	One time (2/3 pts max)

Figure 13. The Author's Progression-based Cognitive Rubric

The rubric presented above has three parameters: regularity, articulation, and progression. The *regularity* criterion is set up to encourage students to visit the e-classroom at least three times during the discussion span, while the purpose of the *articulation* criterion is to push students to express a full thought in their posts that also show some peer awareness. The *progression* criterion incentivizes students to move up the knowledge scale. The rubric assumes a seven day discussion week and uses the same font faces to distinguish between levels, as in the pool. These can be customized as per teacher requirements, discussion durations, and learning management system (L.M.S.) features.

　　　Studying each criterion in some detail might assist in understanding and deploying it across different writing classes. As the time and date of each student's post is readily available in all L.M.S.'s and serve as evidence of the students' online footprint in the e-classroom, the teacher can use them to check on a student's regularity of posting. Regularity is necessary as a criterion, not only to promote student-teacher and student-student interactions, but also to make sure that the students read the teacher's midway and end-of-the-discussion posts. Not using regularity as a grading criterion is equivalent to allowing students to walk out in the middle of a face-to-face class discussion. Coming on time and staying through the entire class is encouraged by an onsite teacher, and so must it be by the online teacher. Hence, the student can earn the full points assigned to regularity if s/he has been present online every other day of the week, with the first post having been made no later than day two if the duration of the discussion is seven days or one week. Students would lose points proportionately if they choose to turn up online later in the week or not at all. The articulation criterion has been set up to encourage lengthy and meaningful grammatical postings (an aim of any writing class), at least one of which shows peer awareness (for which a point could be gained or lost). Five lines, or a hundred words, are required, if a student has to articulate or write out a complete thought in the discussion, especially in writing-intensive classes; hence a hundred-word post constitutes a high-value post for this criterion. It is possible for students to have longer and shorter posts and to earn points accordingly. The third and the most important criterion in this rubric is the progression category, which, therefore, has the highest weightage. It is here that the rubric pushes the discussion upward and encourages students to match the teacher's progressively challenging questions from the leveled post pool. The point to be noted is that answering three or more questions in any one category does not translate to a full score for articulation. Since only two questions are asked at the higher-order categories, students cannot answer just synthesis/ evaluation level questions.

        While students do not have much of an issue in comprehending the
rubric, they find it helpful to have sample posts at each of the three levels
offered to them in order to better understand how to meet the cognitive
levels. Appendix A offers sample student responses to questions asked in
the instructor post pool given in Figure 9, from the higher-order, middle-
order and lower-order categories. Offering such sample student responses
and tips from their own classes can make it easy for facilitators to deploy
the rubric, because it helps students understand rubric expectations. Also,
as with any rubric, the grade and the feedback offered need to be tied to the
rubric. Students find it useful if the feedback clearly indicates the areas
where they met performance expectations while also clarifying how and
where they lost points. Beginning with an explanation of how to earn a
perfect score, the feedback can indicate the range–high, medium, low,
unsatisfactory–in which the student's performance falls in the three key
performance areas of articulation, regularity, and progression, while also
suggesting how they can improve going forward. An example of this writer's
use of the rubric to offer feedback on student posts is offered in Appendix
B.

4.8 Conclusion

        There are numerous benefits in using this new online discussion
management pedagogy. The rubric offered by the pedagogy not only brings
transparency and consistency into grading but also encourages all students
to make some effort to move up the taxonomic scale in their discussion
participation. As individual posts get longer and progressively more
complex (students often write mini-essays in the discussion area), the
discussion also branches and metamorphoses into a tree that grows upwards
cognitively as the discussion progresses. Since peer awareness is rewarded,
threading as well as student-teacher and student-student interactions happen
naturally, with students breaking out into groups. With rising participation,
retention of learning improves and student involvement in the class
increases. Also, students welcome the quantifiability of the metrics and the
learner-centeredness of the new discussion management pedagogy.

        With more satisfied students, student retention shows an upsurge,
and positive student feedback & favorable teacher evaluations go up. Since
the post pool and formalized rubric are specifically intended for use in an e-
environment, the writing teacher will find them to be useful and time saving
e-teaching tools. Essentially, the new online discussion management
pedagogy empowers the online teacher to use discussions to reach out to
students effectively and achieve course learning objectives. The use of the

new pedagogy can, therefore, help substantially in improving course outcomes and providing a superior academic experience for all online classroom stakeholders–students, teachers, and, perhaps, course administrators as well.

Chapter Four

Appendix A
Explaining the Rubric with Samples

EXPLAINING THE RUBRIC WITH SAMPLES

Bloom's Taxonomy Level	Sample Question	Sample Answer	Tips and Explanation
KNOWLEDGE COMPREHENSION *Lower-order cognitive skills denoted in rubric and pool in italics*	*What does turnitin.com do? Should colleges and universities make it a standard procedure to submit all assignments through turnitin, class? What facts show that it is necessary?*	*Turnitin.com is an academic plagiarism detector. It is good for colleges and universities to utilize the services of turnitin.com to help discover plagiarism since plagiarism is on the rise. It is a good tool for Professors because they can check students' work for plagiarism automatically. Not only will professors and universities benefit from making it compulsory to submit all assignments on turnitin.com, but students will as well. For example, students can submit all their written pages to the website and find out if they committed any inadvertent plagiarism by forgetting to use quotation marks or acknowledge the source.*	*You need to show that you recall or recognize information or can restate or review information in your post to earn full points for this level.* *The writer does that when s/he elaborates on the function of turnitin and how it would help teachers and students alike, in 98 words.*
ANALYSIS APPLICATION ***Middle-order cognitive skills denoted in rubric and pool in bold italics***	***Do ethics have any relevance to our discussion on plagiarism? How?***	***Ethics refers to justifiable standards of right and wrong that advise what we, as humans, should do. Ethics has a lot of bearing on plagiarism. It is considered wrong or unethical to use someone else's hard-earned information as your own. If someone takes ideas which belong to you,***	***You need to show that you can separate information into its components, or can solve problems using knowledge and appropriate generalization to meet the requirement in this category.***

	you have been robbed. Whether someone steals your car, or your ideas, it is wrong, and therefore unethical. In fact, plagiarism not only violates individual and social codes of morality, but in some cases the law as well. Students who commit plagiarism must deal with consequences that include failing, suspension, or expulsion.	*The writer highlights the definition of ethical and unethical behavior, and applies it to __acts of plagiarism__ to show that it is __wrong and punishable__. The post is 104 words long.*
SYNTHESIS EVALUATION Higher order cognitive skills denoted in rubric and pool in bold	**Thank you for your posts this week. You should now have a good understanding of what plagiarism is, how to avoid it, and what happens if anyone is caught doing it. As we conclude this week, evaluate what you learned and post any tips that you may have for your classmates.**	
	I learned that it is not necessary to cite what is considered to be common knowledge. I was not aware of this before. I think it is better to cite more rather than less, to be safe. However, too many quotes is not a good idea, because there will be nothing said from the writer. As it is important to distinguish between the two, I am going to use Prof Sarbani's tip of using my own words for my own ideas and put quotation marks around borrowed material. All these learnings will help me to write and cite better in my essays.	**To earn points here, you need to show that you can put information together using critical or creative thinking or can make qualitative and quantitative judgements.** The writer of this post, which is 102 words long, uses his/ her judgement to evaluate the lessons from the discussion that s/he particularly found to be relevant.

Appendix B
Sample Feedback Template Using the Rubric

MEDIUM

As you know, your posts are graded on regularity, articulation, and progression measurements. To earn a perfect score, you are required to upload 100-words posts every other day of the week in response to the italicized, bold italicized, and bolded questions that test different levels of your cognitive proficiency. Also, you need to post by Day 2, and show peer consciousness in your post/s.

Your posts are about 75 words long and did not meet <u>articulation</u> requirements. You also did not show peer awareness. Make sure your posts are 100 words long and respond to at least one peer post next week.

You posted three times last week, but did not post every other day of the week and therefore did not meet <u>regularity</u> requirements. Also, you needed to post by Day 2. Make sure you post three times and every other day of next week, with the first post being uploaded by the second day.

You responded only to the italicized questions, that test your knowledge and comprehension, and to bold italicized questions that assess your ability to analyze and apply. You did not answer any of the bolded questions that explore your ability to synthesize and evaluate, and therefore did not meet <u>progression</u> requirements. Make sure you respond to questions from each of the 3 taxonomic categories through posts that move up the cognitive scale next week. You did well but can do even better.

References

Bisenbach-Lucas, S. (2004). Asynchronous web discussions in teacher training courses: Promoting collaborative learning–or not? *Association for the Advancement of Computing in Education 12(2)*,155–170.

Bloom, B. (1956). *Taxonomy of Educational Objectives*. New York: Longman.

Brown, A. H. and Green, T. D. (2009). Time students spend reading threaded discussions in online graduate courses requiring asynchronous participation. *The International Review of Research in Open and Distance Learning 10*(6), 51–64.

Dabbagh, N. (2007). The Online learner: Characteristics and pedagogical implications. *Contemporary Issues in Technology and Teacher Education 7*(3), 217–226.

De Nigris J. and Witchel, A. (2000). *How to Teach and Train Online*. Boston: Pearson.

Edelstein, S. and Edwards, J. (2002). If you build it, they will come: Building learning communities through threaded discussions. *The Online Journal of Distance Learning Administration 5*(2)*.* Retrieved on 15 March 2013 from

http://www.westga.edu/~distance/ojdla/spring51/edelstein51.html.

Eom, S. B., Wen, H. J. and Ashill, N. (2006). The determinants of students' perceived learning outcomes and satisfaction in university online education: An empirical investigation. *Decision Sciences Journal of Innovative Education*, *4*, 215–235.
doi: 10.1111/j.1540-4609.2006.00114.x.

Huba, M. and Freed, J. (2000) *Learner-centered assessment on college campus: Shifting the focus from teaching to learning*. Boston: Allyn and Bacon.

Kerry, T. (2002) *Learning Objectives, Task Setting and Differentiation*. London: Nelson Thomas.

Kingma, B and Schisa, K. (2008). The economics of learner centered online education. International Federation of Library Associations and Institutions Conference Paper. Retrieved 15 March 2013 from http://archive.ifla.org/IV/ifla74/papers/163-Kingma_Schisa-en.pdf.

Kop, R., Fournier, H. and Mak, J. S. F. (2011). A pedagogy of abundance or a pedagogy to support human beings?: Participant support on massive open online courses. *The International Review of Research in Open and Distance Learning 12*(7), 74–93.

Muirhead, B. (2002). Relevant assessment strategies for online colleges and universities. *United States Distance Learning Association Journal 16*(2), 60–66.

National Center for Education Statistics (2011). *Stats in Brief*. Retrieved on 15 March 2013 from http://nces.ed.gov/pubs2012/2012154.pdf.

Ngwenya, J., Annand, D. and Wang, E. (2008). Supporting asynchronous discussions among online learners. In T. Anderson and F. Eloumi (eds.) *Theory and Practice of Online Learning* (pp. 319–348). Toronto: University of British Columbia Press.

Palloff, R. M. and Pratt, K. (2003). The Virtual Student: A Profile and Guide to Working with Online Learners. San Francisco: John Wiley.

Pisutova-Gerber, K. and Malovicova, J. (2009). Critical and higher order thinking in online threaded discussions in the Slovak context. *The International Review of Research in Open and Distance Learning 10*(1), 24–38.

Reynard, R. (2009) Designing learning spaces for instruction, not control. *The Journal*. Retrieved on 15 March 2013 from http://thejournal.com/Articles/2009/06/03/Designing-Learning-Spaces-for-Instruction-not-Control.aspx?p=1.

Rourke, L. and Anderson, T. (2002). Using peer teams to lead online discussions. *Journal of Interactive Media in Education* 1, 1–21.

Theodore Roosevelt Senior High School (2013). Bloom's Taxonomy-Learning in action. Retrieved on 15 March 2013 from http://rooseveltlausd.org/ourpages/auto/2008/3/10/1205207614776/Blooms-Taxonomy-Rose.pdf?rn=9069977.

University of North Carolina, Charlotte (2012). Writing objectives using Bloom's taxonomy. Retrieved on 5 December 2012 from http://teaching.uncc.edu/articles-books/best-practice-articles/goals-objectives/writing-objectives-using-blooms-taxonomy.

Wolsey, T. D. (2004). Literature discussion in cyberspace: Young adolescents using threaded discussion groups to talk about books. *Reading Online 7*(4). Retrieved on 15 March 2013 from http://www.readingonline.org/articles/wolsey/what.html.

CHAPTER FIVE

MOVING TOWARDS AN OPEN EDUCATIONAL
RESOURCES (O.E.R.) PEDAGOGY: PRESENTING
THREE WAYS OF INTERFACING WITH O.E.R. IN
BUSINESS AND TECHNICAL WRITING CLASSES

Abstract

Open Educational Resources are changing the face of education. Chapter Five discusses open educational resource repositories, the need for curation, and the challenges facing the open educational resources movement. Best practices and outlines of a possible open educational resources taxonomy and open educational resources pedagogy are described. After offering a checklist/ rubric to help educators decide on which open educational resource to choose, the chapter describes three ways of interfacing with Open Educational Resources in writing classes in general, and business and technical writing classes in particular. The paper reviews findings before concluding that the future belongs to open educational resources for their value as multimedia resources. The chapter was first published in the *International Journal of Open Educational Resources,* Volume 3, Number 2, Fall 2020 Winter 2021 issue with the title "Moving towards an Open Educational Resources (O.E.R.) Pedagogy: Presenting Three Ways of Using O.E.R. in the Professional Writing Classroom."

Keywords: open educational resources, curation, repositories, multimedia

5.1 The Ongoing Revolution

Open educational resources are changing the face of education. As free resources, they are bringing the distant close, and making learning, open, and multifaceted. Open educational resources mean different things to different people and are often confused with internet resources. While the

internet does host a wealth of multimedia sources which may or may not have educational value, open educational resources are different. They may be hosted on the internet, and be open like internet sources are, but unlike internet sources, they are vetted for educational value. Another important differentiator between open educational resources and internet sources, is that the open educational resources sites that host these multimedia resources allow licensed reuse, rework, and curation. That there are a plethora of open peer-reviewed sources makes the open educational resources revolution that is happening all around us both attractive and challenging. While it may be foolish not to take advantage of the educational tools that open educational assets can be, using them without a pedagogical understanding and an evaluation method can create havoc instead of promoting engagement, and divert learners instead of enhancing their learning experience. While much research has been done on the growth and possibilities, as well as the technical aspects and the radical economical reshifting that the open educational resources revolution has ushered in, there are not many studies on how open educational resources impact the teaching of writing. This may, perhaps, be the first study that highlights how open educational resources have been used to enhance the experiences of business and technical writing students and teachers. The article has been organized thus: Section 2 offers a brief history of open educational resources, their various definitions, and classifications, as well as a quick review of various repositories. Section 3 presents a taxonomy as well as best practices and a checklist/ rubric to help educators in general, and writing teachers, in particular, to pick open educational resources sources. Section 4 discusses how three Business and Technical Writing Programs use open educational resources.

5.2 What are Open Educational Resources (O.E.R.) & O.E.R. Repositories?

The phrase 'open educational resources' was first used at the 2002 U.N.E.S.C.O. forum on Open Courseware. As per the William and Flora Hewlett Foundation, which has been part of the movement since 2002, "open educational resources 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 permit no-cost access, use, adaptation, and redistribution by others, with no or limited restrictions" (https://hewlett.org/strategy/open-educational-resources/). Open education resources came into being as a fallout of the M.O.O.C.s (massive open online courses) phenomenon, when the world's most prestigious institutions,

which were not considered to be 'open' universities, began opening up free and open online courses. Looking for open educational resources, therefore, is not the same as 'googling' to find something educational, since open educational resources now include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge from universities, foundations, corporate houses, and institutions like N.A.S.A.. Littlejohn et al. (2008) therefore characterize open educational resources as:

> Digital assets–(e.g. an image, video or audio clip), sometimes called a 'raw media asset.'
> Information objects–a structured aggregation of digital assets, designed purely to present information.
> Learning objects–an aggregation of one or more digital assets which represents an educationally meaningful stand-alone unit.
> Learning activities–tasks involving interactions with information to attain a specific learning outcome.
> Learning design–structured sequences of information and activities to promote learning. (p. 759)

The central point of the open provision is that the "educational resources enabled by information and communication technologies" can be used for consultation, use, and adaptation by a community of users for non-commercial purposes (U.N.E.S.C.O., 2002). The vision of open educational resources was to enable the creation of universally accessible educational materials, which anyone could use freely for teaching or learning purposes around the world. In the intervening years, much has been done to bring to pass the vision stated at the Paris conference and open educational resources are now accessible globally.

Digitization is a key feature of open educational resources. As the Centre for Educational Research and Innovation (2007) puts it, open educational resources are "digitized materials offered freely and openly for educators, students, and self-learners to use and reuse for teaching, learning, and research"(p. 30). If 'digitized' implies that open educational resources can be podcasts and multimedia assets, and not just textbooks or print articles, the 'reuse' aspect highlights that open educational resources are editable and shareable.

In 2012, the open educational resource movement gained momentum during the first World Open Educational Resources Congress held in Paris, France, between June 20-22, 2012. This event brought together Education Ministers from a variety of countries to agree on an open

educational resources strategy and way forward to make open educational resources mainstream. The outcome of the Open Educational Resources' World Congress led to the "Paris Declaration" which contains recommendations to:

1. foster awareness and use of open educational resources;
2. facilitate enabling environments for use of information and communication technologies (ICT);
3. reinforce the development of strategies and policies on open educational resources;
4. promote the understanding and use of open licensing frameworks;
5. support capacity building for the sustainable development of quality learning materials;
6. foster strategic alliances for open educational resources;
7. encourage the development and adaptation of open educational resources in a variety of languages and cultural contexts;
8. encourage research on open educational resources;
9. facilitate finding, retrieving, and sharing of open educational resources; and
10. encourage the open licensing of educational materials produced with public funds.
    (https://en.unesco.org/oer/paris-declaration)

Since the open educational resources World Congress in Paris, and their recommendations for open educational resources development, the open educational resources movement has undergone a shift, and has catapulted quite a few countries and institutions into action. Many new open educational resources initiatives are emerging, and policy developments on national and regional levels, and even on some institutional levels, are underway, worldwide.

The most important development of the open education resource movement has been the growth of open educational resources repositories. Open educational projects and repositories are being created and maintained by universities, community colleges, nonprofits, corporate organizations, and even governments. Repositories housing educational documentation, textbooks, videos, podcasts, assessments, and full courses include Merlot, O.E.R. commons, and M.I.T.'s open courseware, to name just three. Plenty of vetted open educational resources may be found in the following repositories: the world digital library site at http://www.wdl.org/en/; the Community College Consortium for open educational resources at https://www.cccoer.org/learn/find-oer/; Princeton University's multimedia repository at https://mediacentral.princeton.edu/; University of Cambridge's Open Educational Resource site at http://oer.educ.cam.ac.uk/wiki/Home;

Oxford University's open resources beta site at https://open.conted.ox.ac.uk/; Canadian Athabasca University's open resources beta site at https://oerknowledgecloud.org/; Hewlett-funded O.E.R. Africa at https://www.oerafrica.org/; and Australia's national digital learning repository at http://www.scootle.edu.au/ec/p/creativeCommons. See Appendix 1 for a screenshot of more open educational resource repositories.

Such open educational repositories serve as sites where open educational resources are collected, collated, and validated. While open educational resources texts and materials may be produced by teachers, citizens, and organizations who want to raise their profiles, or want to share for altruistic motives, what is significant is that most governments or universities do not have policies and pedagogies in place for large scale or exclusive adoption of educational resources that includes complete courses and open textbooks. As per Wiley (2007), open educational resources are open educational resources if they subscribe to the 'Four R's':

1. Reuse: The users can use the open educational resources for their own purposes.
2. Redistribute: The users can share the open educational resources with other individuals.
3. Revise: The user can adapt the open educational resources.
4. Remix: The user can combine two or more open educational resources to create a new open educational resources resource.

In 2014, Wiley updated the Four R's with the addition of Retain, in recognition of the copyrighting needs of O.E.R. creators.

5. Retain: The user can retain ownership and control the open educational resource. (Chapter 16, An Open Education Reader https://openedreader.org/)

As openness, adaptability, and flexibility are hallmarks of Open Education resources, it is easy to assume that attribution is not necessary. More often than not, open educational resources use the Creative Commons license. As per Creative Commons, open educational resources are "teaching and learning materials that are freely available online for everyone to use, whether you are an instructor, student or self-learner" (https://www.oercommons.org/). However, there are gradations of openness, as Figure 1 shows.

FULL COPYRIGHT

ATTRIBUTION, BY, SHARE ALIKE, NO DERIVATIVE

ATTRIBUTION, NON COMMERCIAL
NO DERIVATIVES, BY, NC,ND

ATTRIBUTION, BY, SHARE ALIKE

ATTRIBUTION, BY

PUBLIC DOMAIN

PUBLIC DOMAIN. CCO

Figure 1

Open educational resources that are of interest to writing teachers can be of two broad kinds. The first kind is textbooks, and the second comprises of course outcome enhancement materials. Currently, several options are available to locate high-quality open textbooks, a subset of open educational resources often tapped to find substitutes for traditional textbooks. Among the providers of these are Openstax (openstaxcollege. org), The Saylor Foundation (saylor.org), Washington State's Open Course Library (opencourselibrary.org), and The Minnesota Open Textbook Library (open.umn.edu/opentextbooks/). While quite a few open writing textbooks are available at openstax.cnx.org, oercommons.org, and merlot.org; Project Guttenberg, Manybooks.net, and Readprint.com also house free literary texts. Quite naturally, an individual teacher cannot prescribe an open text, since the dean or departmental head needs to sanction that. As there is a growing realization that open educational resources portals are poised to be information centers that can bring down costs for entire institutions and countries, two of the three case studies presented here discuss adoptions that are institution-driven. While one case study deals with a single department's adoption of an open text, the second instance discusses how a university adopted open educational resources textbooks

and materials as a policy and process across the board. Since the open educational resource revolution does not always have to be top-down, the third instance is that of a single teacher's adoption of open educational multimedia material as an enhancement tool.

When a professor replaces the publisher's textbook, whether it is a CC, BY, or CCO, license with an open educational resource textbook, or introduces supplementary material to supplement a conventional textbook, it creates what Vansupa et al. (2016) describe as "the first moment of building trust between professors and their students" (p. 221). Even more importantly, it is "an acknowledgement by the faculty member that the art of teaching is constantly evolving and that multimedia should be included in their teaching styles (ibid.). In the words of Littlejohn et al. (2008):

> Open learning resources are fundamental to good quality education; however, using only print sources may not be enough now. While the use of print-based resources as an integral part of teaching across all sectors of education and their use has evolved over a long period of time, especially in conventional, didactic modes of teaching, it is now time to move on. The last few decades have seen major changes, both in ideas about effective teaching methods and in the availability and affordance of new types of resources based on digital technologies. Understanding how to employ these new resources is still evolving, and teaching staff are in the position of learners as they explore effective ways of using them [...]. It is the ways in which resources can be used by practitioners, both as learners and as teachers, that are important. This duality of characteristics is particularly evident in our survey of resources that are specifically designed to change eLearning practice. (p. 757-771)

Embracing open educational resources is thus also the embracing of technology. Technology should be viewed as user-friendly. A teacher must be able to collect open educational resources, find a link between them, curate them for easy use during classes, and as s/he acquires masters over O.E.R. use in the class, contribute to them. Many repositories, such as O.E.R. Commons, offer curating capabilities as well.

To use open educational resources effectively requires an understanding of not only open educational resources, copyright laws, and their peculiarities, but also an understanding of technology as an access tool and for curation purposes. Repositories and open courseware host open educational resources using universal design principles. The 2002 U.N.E.S.C.O. conference, which began the O.E.R. movement, was about open software and open courseware, after all. With hosting becoming more common, and technology becoming more familiar and available, at both

teacher and student levels, the open education creator and educator are in a position today to close the educational gap and create what Vansupa et al (2016) describe as "possibilities for the university to function more as a community" (210). The open education technological revolution has made it possible for students to spend no money on textbooks, while offering educators and educational institutions valuable tools to enhance the learning classroom and educational experience at no, or minimal, cost. Notwithstanding the growth in open educational resources, and in spite of the advantages of using them, Allen and Seaman (2014), in their nationally representative survey of 2,144 faculty members in the United States, found that only 34% of respondents expressed awareness of open educational resources (p. 38). While open educational resource creators are using open principles and design for ownership, this does not automatically, as Moore (2018) correctly points out, "create an open educational resources community of practice" (p. 38-39), as not enough is being done to popularize or pedagogize it. To make this happen, "prospective teachers or open educational resources users need to conduct formative and summative evaluations" (ibid., p. 42-43). In order for faculty to replace commercial textbooks with open educational resources, as Allen and Seaman (2014) point out, they not only need to be aware of open educational resources, but they also need to be sure that the open educational resource texts have proven efficacy and trusted quality (p. 11). This brings us to the importance of peer review.

Open educational resources materials and textbooks can be registered under creative commons license, even when they can be repurposed. The location where open educational resources are found is as important as the understanding of the difference between free-to-read and free-to-reuse. The use of open educational resources from reputed repositories lead to better reuse and educational outcomes. The advantages of going to repositories, like O.E.R. commons or university repositories, is that teachers and students alike are assured of their authenticity, accuracy, and educational value. When institutions evaluate resources and repositories before recommending or hosting them, they tend to assess the open educational resource using institutional factors, such as how well the resources or repositories meet institutional requirements and goals. Since peer review is intrinsic to judging the educational quality of the open education resource, the appearance of open repositories that vet open educational resources is a positive development for instructors eager to participate and share in this new world of learning without barriers. Much work needs to be done to aid these instructors, who are willing to use multimedia resources in class, but may need some technological tools for curation.

Open educational resources can be a godsend for any writing teacher. Santos-Hermosa et al. (2017) propose three core dimensions for evaluating open educational resources: general/ descriptive factors to establish types of open educational resources, a focus on drivers for open educational resource reuse, and a focus on educational aspects (p. 88). While it is undeniable that a secure and reusable platform is an important design factor in resource reuse, the real driver for it can only come from pedagogy and bottom-up approaches, as these increase the educational usefulness and the possibility of reuse of open educational resources. What this implies is that when institutions come up with assessment criteria, they can differ from what an individual department or teacher may want to evolve and use. Again, validation by repository creators alone cannot drive up the adoption of open educational repositories.

> One could assume that educational features are more present in open educational resources-exclusive repositories, which are created to meet an educational need, [...(yet)...] such repositories are not currently achieving their fullest potential. Although there is more educational information in this kind of repository (just over sixty per cent), there are still many cases of open educational resources described and retrieved by type or format, instead of by detailed educational metadata that better meets the users' needs. (Ibid. p. 113)

To facilitate better sharing and use of repositories, there is, thus, a need to evolve and share best practices at the instructor level.

5.3 Best Practices with Open Educational Resources

Leonard Bloom (1956) segregated learning into cognitive categories: knowledge, comprehension, analysis, application, synthesis, and finally, the evaluation category. Teachers were encouraged to move students from level 1 to level 6, or from knowledge to evaluation.

Figure 2: Bloom's Taxonomy

With open educational resources, the teacher needs to move from identifying and collecting resources to connecting and curating them for use in classes. Otherwise, the resource, however interesting and relevant, becomes extra work for the student. Unless the sources are connected to an assignment or the resources—whether videos, audios, or PowerPoints—are curated, using open educational resources will not be gainful. Since curation implies sorting, sifting, and combining, it implies and requires both pedagogical and technical knowledge. It is only when the instructor has achieved good results in class with curated open educational resources that s/he reaches the highest level, that of contributing and sharing for reuse. So, like with Bloom's taxonomy, a taxonomy of open educational resources should show an upward movement over the four action categories: collect, connect, curate, and contribute (Valenza et al. 2014).

Figure 3: Taxonomy of open educational resources use

In stage one, the writing teacher learns about open educational repositories and open education resource attribution norms, and searches for useful and relevant content that can enhance the classroom and students' understanding of the subject matter. While checking for available multimedia resources that have proper creative commons licenses, and which will sit well with the content, writing instructors find educational resources textbooks on the subject matter that could be prescribed. Even if they do not have the authority to prescribe them, facilitators could recommend them as additional reading.

In the second stage, the writing instructor gets to work connecting the sources with course outcomes, and preserving them either for a specific purpose, or for their appeal to the student audience. At this stage, it might be useful to have a checklist or a list of selected parameters. While each instructor would probably have a sense of what s/he wants, I have found these five to be really useful: content, format, accessibility, shelf-life and 'wow factor.' While the relevance and accuracy of the content cannot be overemphasized, the format is equally important. Quite often, students have various learning styles, yet all printed material seems to be geared towards helping the textual learner, rather than the auditory, the visual, or the kinesthetic learner. Open educational resources provide the opportunity for the teacher to use audio or video to engage learners. S/he saves time and energy by using multimedia open educational resources without having to give up on being able to appeal to all learning styles. The instructor is also able to engage, interest, and encourage students to interact with the material at hand without having to create audio, video, and visuals, since not

everyone has the skill to create multimedia materials. However, it is important at this point to remember the accessibility factor. Resources need to be easily accessible and downloadable, since not all students have access to 5G networks or fast modems. Accessibility factors apart, writing teachers do not teach core courses, so the 'wow factor' of multimedia resources needs to be tapped. The 'wow factor' is an important criterion, as it can drive and enhance students' interest and engagement in the class. Unlike those found in open educational resources repositories, shelf life can also be an issue when open educational resources sources are picked up from YouTube for instance, since they can be removed at the will of the creator. Not all criteria in the checklist are equally important, hence I do not give equal weight to each parameter. Personally, I assess the 'wow factor' and the shelf life at half the weight that the other three carry.

In stage three, the instructor moves on to curate the open educational resources which have been found, collated, and preserved. At this stage, the instructor analyzes, comments, evaluates, and contextualizes the resources and holds discussions within them. There are numerous curating resources out there (see Appendix 2 for a picture of the very many tools available, even if this is not an exhaustive list), but having used Storify, Evernote, Scoop it, Curriki, and TedEd lessons, I would recommend them. In my Evernote lesson at https://bit.ly/SarbaniEvernoteTitle (Screenshots presented in Appendix 3), I curated Richard Branson 'Beermat Pitch' video onto my writing course project. I discuss the open educational resource to provide the larger picture, the context, and the value of the project assignment. The video not only provides an interesting start to the 6P theory of project pitching (Magrino and Goeller, 2013), but also gives me the opportunity to provide the 6P form to start off the semester-long assignment. What I am doing here, pedagogically, is using the curating functionality to localize the resource.

The need to localize in order to curate and integrate the resources into the classroom cannot be over-emphasized because this is what houses the resource and turns it into a pedagogic entity. It is the process through which educational resources are adapted to meet local teaching and learning needs. According to ISKME (2007):

> Open educational resource localization refers to the process of taking educational resources developed for one context and adapting them for other contexts. These contexts can, for example, be geographical, pedagogical, political, or technical. The practice of localization encompasses more than the translation of materials into a local language or swapping a photo to reflect a culture. Localization is at the heart of the

open educational resource process—it exemplifies diversity, openness, and reusability. (p. 45)

Localization happens when modification happens, irrespective of what is being taught, or where it is being taught.

Localization happens in proportion to the reasons that drive the teachers to use open educational resources. While most writing teachers may opt to use O.E.R. to broaden horizons, or to be current, and, hence, use it as supplementary coursework, some may actually opt to use it to improve their teaching practices, and form a sharing community with like-minded teachers. Whatever the motivation, here are a few reasons why open educational resources are generally localized:

> To address a particular teaching style or learning style;
> To adapt for a different grade level;
> To adapt for a different discipline;
> To adjust for a different learning environment;
> To address diversity needs;
> To address a cultural preference;
> To support a specific pedagogical need;
> To address either a school or a district's standardized curriculum. (ISKME 2007, p. 45)

The 'format' criterion of the checklist or rubric is used to evaluate the open educational resource material and, therefore, needs to account for the ease, or lack of it, in assisting the instructor in his/ her effort to localize and curate.

The fourth and final step of the Open Educational Resources taxonomy moves beyond curation to creation and contribution. When the writing instructor not only uses the open resource after localizing it but converts it into a new modified resource in the process of adaptation and localization, s/he may be ready to go public with it. At this point, the open educational resource becomes a redefined resource that can be shared with fellow instructors to use and re-use. At this stage, the O.E.R. writing instructor is contributing to the movement by collaborating with the source, and transforming or transcreating it to benefit the academic community.

The ten-point open educational sources checklist that evolves out of the best practices of an O.E.R. pedagogy can be envisaged as a possible rubric thus:

PARAMETERS	WEIGHTAGE
CONTENT **1) Is the content accurate?** **2) Has it been vetted? Did I pick it up from an O.E.R. repository that uses peer review to validate content?**	**5**
ACCESSIBILITY **3) Can I localize it?** **4) Can all my users access it?**	**5**
FORMAT **5) What form or multimedia format is it in?** **6) Can my or my institution's server handle the load? Will its present problems on my students' devices/ connections?** **7) Does it allow easy remix for reuse and updating?**	**5**
SHELF LIFE **8) How long do I assume its shelf life will be? Is the expected time of use worth the effort I have to put in to localize it?** **9) Can it be updated seamlessly? Or will it have to be completely replaced?**	**2.5**
WOW FACTOR **10) How will it engage my students in learning? Will it wow my online and on-site students equally?**	**2.5**
TOTAL	**20**

This rubric has helps me immensely in my career as an O.E.R. instructor.

As we move towards an O.E.R. pedagogy, it is good practice to share how individual teachers and institutions are going about their evolution into open instructors. There are numerous ways that open educational resources can be used by the writing teacher in teaching professional and technical writing, as the next section highlights.

5.4 Three Ways of Using O.E.R. in the Business and Technical Writing Classroom

At Rutgers University, New Jersey, the prescribed texts (Magrino and Goeller, 2013) operate on the 6P principles of project writing, where

each P symbolizes one aspect of the project that students need to develop to complete their real-world course project. The 6Ps are Patron, Problem, Public, Paradigm, Plan, and Price. Students work towards their 6P projects through three assignments: the midterm letter to the patron with the proposal pitch and idea; the simulated presentation to the patron; and the final project proposal where the plan and the price are worked out to full detail. Since students have to validate their approach, and find and situate the case studies within the theoretical framework of the suggested solution in their attempt to persuade the patron to give them an opportunity to implement their technical or business proposals, there is plenty of scope for instructors to use open educational resources to facilitate student research into models of success (and failure) to fulfil their objectives. Personally, I use Ted-Ed lessons to curate my open educational resource integrated lessons to demonstrate how students can best present their proposals. In my lesson on https://ed.ted.com/on/9NPbqYnF, I reuse a BNET Steve Jobs video (which is an open educational resource) and integrate it onto a lesson that involves explaining the assignment, highlighting how students can meet rubric expectations, even as I hold a discussion within the assignment (For screenshots, please see Appendix 4). As in the previously alluded to Evernote lesson, I only integrate e open educational resources that notch up a perfect rubric score, and weave in my class presentations, rubrics, forms, and explanations (Appendix 3). As per student feedback—I have been teaching the class since 2009—I can report that my Evernote lesson increased both interest and retention for both online and onsite classes, while the Ted Ed lesson (Appendix 4) was particularly useful for onsite classes, where students come up with their own 'wow factors' based on their takeaways from the Steve Jobs video. There are numerous ways that curated lessons can be used to increase engagement and performance of students, and there are umpteen instances of individual business and technical writing teachers like me interfacing with, combining, and sharing, curated open educational resources to enhance student understanding.

A second way of interfacing with open education resource is the use of an open text. Cogswell Polytechnical College, now University of Silicon Valley in California, was faced with the problem of students complaining about the high price of the prescribed textbook in the Technical Writing class. When the Dean of Education, Jerome Solomon, approached me for a solution, I suggested an open text, *The Mayfield Handbook of Technical & Scientific Writing,* written by Massachusetts Institute of Technology Professors, James Paradis, Leslie C. Perelman, and Edward Barrett. Not only was the suggestion of an open source text accepted right away, but it led to extremely positive outcomes that included student

savings and student retention, prompting the then Director of Online Learning, Richard Schimpf, to state that the course is "one of our most popular online courses" (see Appendix 5).

An important clarification is required here. *The Mayfield Handbook* is not just an O.E.R. text, it is an open text because it is both scholarly and peer-reviewed, like open access journals. Conceived as a text for M.I.T.'s open courseware initiative (http://ocw.mit.edu/courses/audio-video-courses/), the handbook is now open for the world to use. As author James Paradis puts it, "We were always thrilled to imagine that we could field a useful guide to Science and Technical Communication that would be free in a digital and easy-to-use format. Long live the principles and practices of Open Education! *The Mayfield Handbook* was a digital-born project that then made its way into print. At any rate, we have made it open access, and hope it continues to serve science and technical communicators everywhere" (Email to me, May 25 2019). Another textbook available in the field of technical writing is *Technical Writing* by Allison Gross, Annemarie Hamlin, Billy Merck, Chris Rubio, Jodi Naas, Megan Savage, and Michele Desilva, which can be found in Oregon University's O.E.R. repository, Open Oregon Educational Resources (https://openoregon.press books.pub/technicalwriting/). A Saylor Foundation-sponsored business writing textbook by McLean and Moman, titled *Business English for Success*, is available at the University of Minnesota's open textbook library (https://open.umn.edu/opentextbooks/textbooks/business-english-for-success) and is in use in thirteen institutions of higher learning (see site for list). In spite of the availability of such texts, challenges to the production and adoption of open textbooks remain. They are:

1) faculty members' and students' expectations of high production quality and ancillaries for open textbooks,
2) methods for documenting and maintaining control over various versions, and
3) the process of converting existing open content to digital and accessible formats. (Judy Baker et al. 7)

When there is a university-wide decision to adopt open resources and open texts, the problems and the resistance can be surmounted. University of Maryland University College (UMUC), offering classes across Maryland, and in Europe, the Middle East, and Asia, was able to surmount obstacles successfully, and put to the test the premise that, a system of publicly financed textbook production could co-exist alongside the system of copyright monopolies, allowing for a market test of the relative efficiency of the two systems. Such an alternative system could, as Baker et al (2009) point out, offer large savings to students, more flexibility to professors, and

efficiency gains to the economy as a whole (p. 6). By moving to all O.E.R. texts and resources, universities can reduce costs, encourage retention, and increase enrollment, and is the third, and perhaps the most effective, way of interfacing with open educational resources.

The UMUC story of sustained effort toward using open educational resources across courses, departments and countries, is significant. According to *Inside Higher Ed,* "In 2014, the university told *Inside Higher Ed* that if it couldn't increase enrollment by 5 to 7 percent per year, it would be forced to raise its tuition fees. The university's worldwide enrollment had shrunk to its lowest level since 2006. Fast-forward to today, and UMUC is reporting 52,987 new and returning US-based students enrolled in the summer and fall terms of 2017, the highest in the university's 70-year history" (Mckenzie, January 8 2018). According to Javier Miyares, the UMUC president at the time, the increased US enrollment was the result of a multipronged strategy that involved "moving away from traditional textbooks and transitioning fully to open educational resources. In the 2013-14 academic year, UMUC reported its average books and supplies cost was $1,000 per student. In 2014-15, it was $600. And by 2015-16, it was zero" (Ibid.).

The Writing department at the University of Maryland University college was at the forefront of the shift to open educational resources, including open textbooks. While business writing courses at UMUC opted for McLean and Murray's *Business Communication*, the technical writing class used the Mayfield text and an open corporate-produced textbook, titled *Tech Writing Handbook* by Kyle Wiens and Julia Bluff, as an additional text. In addition, both the Business and Technical writing courses used numerous open educational podcasts, videocasts, video reviews, work instructions, user manuals, video tutorials, weblogs, white papers, guides, manuals, and articles, are carefully curated, and organized, week by week, in keeping with weekly deliverables and progressive outcomes, so each builds onto the others in order to fulfil course objectives. When I am invited to teach these courses at UMUC, now renamed UMGC (University of Maryland Global Campus), I experience at first hand the delight of students at having the no-cost option of textbooks and learning materials.

5.5 Discussion and Conclusion

The use of open educational resources in business and technical writing classes, whether as additional materials, as prescribed textbooks, or as additional educational materials in the institutions just discussed, shows that open educational resources can enhance the project writing classroom

successfully. Whether used singly, additionally, or exclusively, open educational resources are offering educators ways to raise engagement levels through offering a repository of multimedia materials. Open educational resources are thus expanding the toolbox of online educators to connect with students, with multiple learning styles at multiple levels, while saving them time and offering them opportunities to collaborate, contribute, and create with colleagues. However, the open educational resources revolution will reach its full potential, not just with business and technical writing classes, but with all courses, only when teachers move up the O.E.R. taxonomic scale, even as the methods for documenting and maintaining control over various resource use in departments, and the will to migrate in institutions, grow. When the Hewlett foundation put together its O.E.R. strategy in 2020, they acknowledged that "While scale and access have been the focus of O.E.R.'s initial growth, we see considerable interest and opportunities for O.E.R. to enhance student and teacher agency. We are at a point in time when we can begin to more deeply explore questions about how open education can engage learners who come to school with different experiences, needs, and interests. This work calls on the field to advance the sustainability of open education models, to increase opportunities for collaboration among organizations in the open education ecosystem, and to intentionally invite new voices and perspectives for leadership and insight" (DeBarger, 2019). What this means is that, irrespective of what universities and O.E.R. organizations decide, the role and importance of open faculty will continue to be important and critical, as it is they who localize information and take it to the students. As Anderson (2010) puts it:

> Institutions should value intellectual diversity, and by this, I mean that institutions *need* open faculty in the same way they need extraordinary teachers and expert researchers. Open digital faculty are exceptionally good connectors…These faculty can be extremely valuable for connecting faculty in one field with those who have similar ideas in another field, or at a different level of education. Because they share on the web, open digital faculty can maintain good ties with former students (now alumni) and with colleagues in other countries. (p. 49)

To sum up, this may be the way for open faculty to join in and strengthen the open educational resource movement:

- Know that open educational resources are academically feasible.
- Keep using open educational resources to connect to students.

- Begin working with digitized materials and curation tools.
- Move up the O.E.R. use taxonomy scale.
- Help in developing models and processes to support open educational resources textbooks.
- Spread the word about open educational resources and share best practices.
- And as adoption grows, prepare for the open educational resources revolution that will eventually overhaul curriculum, pedagogy, and assessment.

Appendix 1: List of Open Educational Resource Repositories

Retrieved from Prof Joyce Valenza's upload @
http://www.pearltrees.com/joycevalenza/oer-portals/id17856381#l958

Appendix 2: List of Curation Tools

Retrieved from Joyce Valenza @ http://www.pearltrees.com/t/curation-tools-platforms/id17762089

Appendix 3: Evernote Use Screenshots

https://bit.ly/SarbaniEvernoteTitle

Evernote

Project Writing: Finding the Pitch for your Proposal

How do I begin a project?

By thinking about the pitch.

To know more about the pitch, watch this

https://www.youtube.com/watch?v=U3Qgull6W_s

How can I arrive at my pitch?

By knowing your 6 Ps

What on earth are the six Ps?

Go through this presentation to find out

P

SIxP.pptx
240.3 KB

Evernote

Save Copy to Evernot[e]

What is the link between the pitch and the 6 Ps ?

MY PROJECT PROPOSAL WILL HELP A SPECIFIC POPULATION ADDRESS A PROBLEM BY DEVELOPING A PARADIGM-BASED PLAN OF ACTION THAT STAYS WITHIN THE PRICE THAT YOU AS A PATRON MAY BE WILLING TO PAY

YOUR PITCHING ASSIGNMENT:
ARRIVING AT THE PITCH THROUGH THE 6 PS TABLE

PROJECT TITLE
Must contain what(problem), how(methodology of the solution) &nd
where(local area of implementation)

THE 6 PS (from Magrino & Goeller, *Effective Business & Professional Writing*, Kendall Hunt, Second edition)	RECORD THE LOCATION USED TO DEVELOP [(Web URL, article, etc.)
PATRON Who would be willing to fund this project? Why would they want to fund it?	
POPULATION Who does the problem affect? That is, who has a stake in seeing that there is a solution to the problem? Does your population have the same interests as the Patron?	

PROBLEM

What are the main problems that need to be addressed? How could research shed light on these problems to emphasize their scale, scope, and significance? What sources of information about the problem would the patron find most persuasive?

PARADIGM

Any case studies that can prove your idea will work? Where might models be found to help shape the plan? What research would help? What disciplinary matrix will guide you? If you have found models already, attach the links in the adjacent column.

PLAN

What plans are some possible plans? If you are doing an experiment, what procedures will you use? What will you need to know in order to develop a logical plan?

PRICE

How might your budget be limited? How much do you think the project might cost?

W

MY PITCH.docx
205.6 KB

Appendix 4: Screenshots of my use of TED-Ed Lesson

https://ed.ted.com/on/9NPbqYnF, to introduce and discuss the presentation assignment where I use a Steve Jobs BNET video as a hook and centerpiece. I utilize the tool so I can hold a conversation about the upcoming presentation assignment along with rubrics and samples both while presenting it in class and asynchronously online

Present Like Steve Jobs

LESSON CREATED BY **SARBANI VENGADASALAM** USING TEDEd

VIDEO FROM **BNETvideo** YOUTUBE CHANNEL

Let's Begin...

Welcome to the Presentation Assignment. As you know, you have to make a presentation on your project to the class very soon. The assignment will be graded for 15 points. Would it not be great to use this opportunity to hone your skills for the real world? Come, lets learn from the pro- Apple founder Steve Jobs- himself!?

(1) (2) (3) (4) (5)

How did Steve Jobs create excitement before he began his presentation? How can you?

Save My Answer

4M
iPhones sold to date
You Tube

Watch

Think

Dig Deeper

Discuss

...And Finally

Present Like Steve Jobs

LESSON CREATED BY **SARBANI VENGADASALAM** USING **TED**Ed

VIDEO FROM **BNETvideo** YOUTUBE CHANNEL

Let's Begin...

Welcome to the Presentation Assignment. As you know, you have to make a presentation on your project to the class very soon. The assignment will be graded for 15 points Would it not be great to use this opportunity to hone your skills for the real world? Come, lets learn from the pro- Apple founder Steve Jobs- himself?

Watch

Think

Dig Deeper

Discuss

...And Finally

Additional Resources for you to Explore

The Oral Presentation Assignment Particulars:

The Oral Presentation is a 10 to 15 minute spoken proposal addressed to your patron (i.e.: the person or people who might fund your idea). This is a formal presentation and you must use visual aids to help convey information clearly and effectively. The point of the presentation is to make a leadership statement for a specific audience that puts information into action by proposing a research-justified solution to a well-defined problem.

The oral presentation is both a useful step in the process of developing your project and a unique assignment for which you will receive a grade. It therefore serves two sometimes competing purposes:

• As an "oral draft" of the final project, it's an opportunity to rehearse your audience-awareness, to organize your research, to develop your plan, and to get feedback from the

Present Like Steve Jobs

LESSON CREATED BY **SARBANI VENGADASALAM** USING **TED**Ed

VIDEO FROM **BNET** video YOUTUBE CHANNEL

Let's Begin...

Welcome to the Presentation Assignment. As you know, you have to make a presentation on your project to the class very soon. The assignment will be graded for 15 points. Would it not be great to use this opportunity to hone your skills for the real world? Come, lets learn from the pro- Apple founder Steve Jobs- himself?

4 Guided Discussions   0 Open Discussions

Sarbani Vengadasalam
Lesson Creator

Start a Discussion

Can your WOW factor be simple yet memorable? Why or why not?
03/21/2014 - / 0 Updates 0 Responses

What was the WOW element used by Jobs? How can you WOW the audience?
03/21/2014 - / 0 Updates 0 Responses

What can be the ONE or the many, different WOW factors you introduce in your presentation?
03/21/2014 - / 0 Updates 0 Responses

Carmine Gallo talks about giving them a show. Can you do that through your WOW factor?
03/21/2014 - / 0 Updates 0 Responses

4M
iPhones sold to date

You Tube

Watch

Think

Dig Deeper

Discuss

...And Finally

Appendix 5: Cogswell College
Email Exchange Screenshots

sign out | Sarbani

Find Someone

Hi Jerome

The current text is the book Dean suggested: I just went along with it.

I would recommend The Mayfield Handbook of Technical and Scientific Writing available at : http://www.mhhe.com/mayfieldpub/tsw/home.htm: I learnt about it in the Open Education Resource certification workshop I took last year. I have used it, and it is free.

Our students will be delighted by this, wouldn't they?

Sarbani

Sarbani Vengadasalam, MA, M Phil, Ph.D
Adjunct Instructor, Technical Writing
Cogswell Polytechnic College

Jerome Solomon
To: Sarbani Vengadasalam

- This message was sent with High importance.
- You replied on 4/24/2015 7:20. AM.

Thursday, Ap

Sarbani,

Can you consider finding a less expensive book for your class? Some of our students struggle with basic expenses (like food & me transportation), and in many cases these books are out of pocket costs for them.

Dept	Section	Professor	Textbook(s)	Author	ISBN	Ap Bo
ENG	220	Vengadasalam, S.	Writing in the Technical Fields	Ewald Thorston	978-0195449082	

Delete ▾ Move ▾ Filter ▾ View ▾

Entire Mailbox

Subject and message body

esults in:

rom

tegory: Blue Category

Conversations by Date ▾ Newest on Top

rbani Vengadasalam's ...
an Hammond; Jerome So... 5/1/2015

G220
hard Schimpf 4/29/2015

culty Course Evaluation...
latanov@cogswell.edu 4/29/2015

15-04-14 SU-15 Adjunc...
gswell College 4/26/2015

ase sign 2015-04-14 S...
bieHuman Resources C... 4/25/2015

Dx At Cogswell
chael Sass 4/23/2015

G220 as 15 week class
hard Schimpf 4/16/2015

ure writing tutors
nard Crosby 4/8/2015

ting tutoring
nard Crosby 4/7/2015

WebApp

...box 698 Items

sign out | Sarbani Vengadas...

Find Someone | Options

New ▾ Delete ▾ Move ▾ Filter ▾ View ▾ «

Search Entire Mailbox   Q ▾

Results in: Subject and message body ▾

From ▾

Category: Blue Category ▾

Conversations by Date ▾   Newest on Top

ENGL 220
Richard Schimpf; Dean Ham....   5/8/2015

Final Grades
Soma Frazier   5/8/2015

ENG220
Dean Hammond   5/4/2015

Sarbani Vengadasalam's...
Dean Hammond, Jerome So...   5/1/2015

ENG220
Richard Schimpf   4/29/2015

Faculty Course Evaluation...
mzlatanov@cogswell.edu   4/29/2015

2015-04-14 SU-15 Adjunc...
Cogswell College   4/26/2015

Please sign 2015-04-14 S...
DebbieHuman Resources C...   4/25/2015

Enjoy India! Have a great time!
Sarbani

Sarbani Vengadasalam, MA, M Phil, Ph.D
Adjunct Instructor, Technical Writing
Cogswell Polytechnic College

Richard Schimpf
Friday, May 08, 2015 8:2...

You're most welcome, Sarbani. The course is already one of our most popular online courses.

I'll be in India and hard to reach (at best) over the next couple weeks. Dean, if you can ensure that Sarbani gets her summer shell as soon as practicable I'd most appreciative. It will be helpful to follow up with Andrey.

Best,
R

Sarbani Vengadasalam
To: Richard Schimpf; Dean Hammond
Sent Items
Friday, May 08, 2015 8:4...

Of course, we can, Rich. In fact, I believe we have have made excellent progress so far—the 15 week syllabus is ready. If we are able to keep going at the pace we are going today, we will be good for the shorter version of the class

My email was to ensure that the 10 week class comes out as well as the 15 week one. I believe it will be a little challenging for the students since the have to complete all the 15 week assignments in 10 weeks, so we need to ensure that we combine the week and their assignments in a way that it seems seamless to the students

References

Allen, I. E., & Seaman, J. (2014). *Opening the Curriculum: Open educational resources in US Higher Education*. Oakland: Babson Survey Research Group. & Pearson. Retrieved from http://www.onlinelearningsurvey.com/oer.html

Andersen, M. H. To Share or Not to Share: Is That the Question? *EDUCAUSE Review,45.* 4 (July/August 2010), 40-49. Retrieved from https://er.educause.edu/articles/2010/8/to-share-or-not-to-share-is-that-the-question

Baker, D. (2005). Are Copyrights A Textbook Scam? *Alternatives for financing textbook production in the 21st century. CEPR Reports and Issue Briefs,* No. 2005-26. Washington, D.C: Center for Economic and Policy Research (CEPR). Retrieved from https://econpapers.repec.org/paper/epopapers/2005-26.htm

Baker, J., Thierstein, Fletcher J., Kathi, F., Kaur, M. & Emmons J. (2009). Open Textbook Proof-of-Concept via Connexions, *The International Review of Research in Open and Distance Learning 10*(5), 1-13. doi:10.19173/irrodl.v10i5.633

Blessinger, P., & Bliss, T. J. (Eds.). (2016). *Open education: International perspectives in higher education*. Cambridge: Open Book Publishers. Retrieved from https://www.openbookpublishers.com/product/531

Bloom, B. (1956). *Taxonomy of Educational Objectives*. New York: Longman.

DeBarger, A. (2019). Exploring the future of open educational resources. Hewlett Foundation. Retrieved from https://hewlett.org/exploring-the-future-of-open-educational-resources/

Gurell, S. Yu-Chun, K. & Walker, A. (2010). The pedagogical enhancement of open education: An examination of problem-based learning. *The International Review of Research in Open and Distributed Learning 11*(3), 95-105. doi:10.19173/irrodl.v11i3.886

Gross, A., Hamlin, A. Billy Merck, B., Rubio, C., Naas, J., Savage, M. & Desilva, M. (2019). *Technical Writing.* Open Oregon press. Retrieved from https://openoregon.pressbooks.pub/technicalwriting/

Institute for the Study of Knowledge Management in Education, ISKME. (2007). What is Localization? In *The "How Tos" of O.E.R. Commons*. (pp. 45-48). Houston: Texas University. O.E.R. Commons. Retrieved from http://cnx.org/contents/7419abbe-061c-4d34-b133-b4edca7597c8 @5/What-is-Localization

Kop, R., Fournier, H. & Mak, J.S.F. (2011). A pedagogy of abundance or a pedagogy to support human beings? Participant support on massive open

online courses. *The International Review Of Research In Open And Distributed Learning 12*(7), 74-93. doi:10.19173/irrodl.v12i7.1041

Littlejohn, A., Falconer, I. & McGill, L. (2008). Characterizing effective eLearning resources. *Computers & Education*, *50*(3), 757-771. doi:10.1016/j.compedu.2006.08.004

Littlejohn, A. & Pegler, C., (Eds.). (2014). *Reusing open resources: learning in open networks for work, life and education*. New York: Routledge.

Magrino, W, & Goeller, M. (2013). *Effective Business and Professional Writing: From Problem to Proposal*. Second edition. Dubuque, IA: Kendall Hunt Publishing Company.

Magrino, W, & Goeller, M. (2013). *Scientific and Technical Writing Today: From Problem to Proposal*. Second edition. Dubuque, IA: Kendall Hunt Publishing Company.

McGreal, R., Kinutha, W., & Marshall, S. (2013). *Perspectives on open and distance learning: Open educational resources: Innovation, research and practice*. Vancouver: Commonwealth of Learning and Athabasca University. doi:10.1111/bjet.120964

McLean, S. and Moman, M. (2012). *Business Communication for Success*. Canadian Edition. Available at https://catalog.flatworldknowledge.com/catalog/editions/mcleancanada-business-communication-for-success-canadian-edition-1-0

McKenzie, L. (Jan 8, 2018). Has UMUC Turned Enrollment Woes Around. *Inside Higher Ed.* Retrieved from https://www.insidehighered.com/news/2018/01/08/has-umuc-turned-enrollment-woes-around

Moore, M. B. (2018). *Through the looking glass with open educational resources* (Order No. 10937842). Available from ProQuest Dissertations & Theses Global. (2151426547). Retrieved from https://search-proquest-com.proxy.libraries.rutgers.edu/docview/2151426547?accountid=13626.

Organisation for Economic Cooperation and Development & Centre for Educational Research and Innovation. (2007). *Giving Knowledge for Free: The Emergence of Open Educational Resources*, Centre for Educational Research and Innovation. Paris: OECD Publishing. Retrieved from http://www.oecd.org/education/ceri/givingknowledgeforfreetheemergenceofopeneducationalresources.htm

Santos-Hermosa, G., Ferran-Ferrer, N., & Abadal, E. (2017). Repositories of Open educational resources: an assessment of reuse and educational

aspects. *The International Review of Research in Open and Distributed Learning*, *18*(5), 84-120. doi:10.19173/irrodl.v18i5.3063

Schlicht, P. (2013). Turning the digital divide into digital dividends through free content and open networks: WikiEducator Learning4Content (L4C) Initiative. *Journal of Asynchronous Learning Networks 17*(2), 87-100. Retrieved from https://olj.onlinelearningconsortium.org/index.php/olj/article/view/354

UNESCO (United Nations Educational, Scientific and Cultural Organization). (2002). Forum on the impact of open courseware for higher education in developing countries. Final report. Retrieved from www.unesco.org/iiep/eng/focus/opensrc/PDF/openeducational resourcesForumFinalReport.pdf

UNESCO (United Nations Educational, Scientific and Cultural Organization). (2007). Paris Declaration. Retrieved from https://en.unesco.org/oer/paris-declaration

Valenza, J. K., Boyer, B. L., & Curtis, D. (2014). Social media curation. Chicago: ALA TechSource.

Vanasupa, L., Wiley, A, Schlemer, L., Ospina, P., Schwartz, P., Wilhelm, D., & Hall, K.(2016). What does it mean to open education? In P. Bolsinger & T. J. Bliss (Eds.), *Open education: International perspectives in higher education* (pp. 199-221). Cambridge, UK: Open Book Publishers. Retrieved from https://www.openbookpublishers.com/product/531

Wiens, K. & Bluff, J. *Tech Writing Handbook.* Dozuki Retrieved from http://www.dozuki.com/tech_writing

Wiley, D. (2014). *An open education reader*. Creative Commons. Retrieved from https://openedreader.org/

CHAPTER SIX

INFOGRAPHICS IN ACADEMIC & PROFESSIONAL WRITING

Abstract

The chapter focuses on the need to use infographics in academic teaching and project writing. The special requirements of teaching to the new generation of students are discussed, and why it has become necessary for teachers to use infographics to enhance their teaching and classroom interaction are detailed. Why teachers of academic, professional, and technical writing classes, in particular, need to encourage students to use infographics, which are combinations of texts and images, data visualizations and illustrations, brought together effectively by the creator's controlling vision, is pointed out. The chapter proffers practitioner details on infographic tools, possible assignments, and best practices. An earlier version of the article was published under the title "The Why and How of the Infographic Wow: Infographics in Teaching and Writing-Best Practices" in the *DeVry University Journal of Scholarly Research* Volume 4, Issue 2 in 2018.
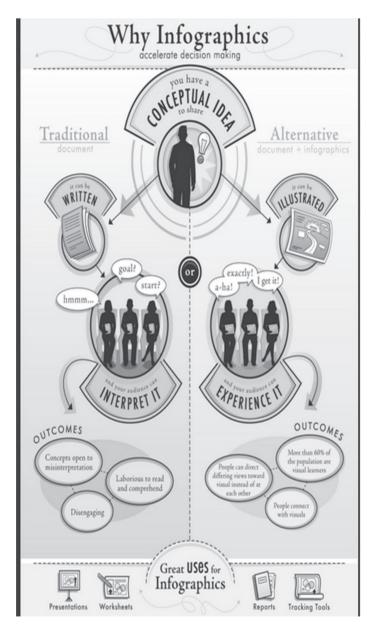
Keywords: Infographics, CRAP, LATCH

6.1 Why do we need Infographics?

Infographics is a great new way to communicate complicated data and present complex information. A form of visual shorthand, infographics offer presenters and writers the power to distill content and showcase it through pictures in a manner where the subject matter neither loses its potency nor the context within which it operates. Infographics can be perceived as a combination of text, pictures, data, and illustrations. However, what is central is how the combination is brought together by the author's creative idea and controlling vision. Put differently, infographics need to tell a complete story of how data and ideas are linked. A way to sort, group, and organize data, infographics have become commonplace in news media,

marketing, and technical fields because they help users/ audiences visualize the big picture that might otherwise be difficult to comprehend. Given the trend toward visual rather than textual consumption of information, infographics can move beyond being a graphic representation of information into a new way of processing and demonstrating knowledge. As Lamb and Johnson (2014) rightly point out, when these innovative visuals are connected with books and other library resources, "synergy can occur to facilitate new ways of thinking" (p. 54). This paper highlights how the new synergy can be achieved by proffering best practices on creating infographics as well as indicating how it can be used in writing and teaching.

Students of this generation are informovores. Surrounded and bombarded by visual information, they thirst for a way to learn that satisfies their visual instincts and increases their ability to retain data. As infographics provide context and patterns while creating a "picture superiority" effect, even the most complex data can be presented in an organized and memorable manner. Infographics can be a godsend for writers of the push-pull era who are looking to present visual summarizations in their business and technical proposals and reports, or white papers and manuals. It can also be of assistance to teachers looking for a way to demonstrate how theories and artifacts interact, or to discuss methods and results of scientific experiments. Infographic programs can be used to write out resumes as effectively as to present data and findings visually in publications and dissertations. Entire online courses can be built on infographics too. Here is a simple infographic on how, why, and where infographics can be used:

Source: http://www.infographicsshowcase.com/wp-content/uploads/2010/03/Use-Infographics.jpg

However, the benefits of infographics can be realized only if certain practices are followed.

6.2 Best Practices

Audience is king. Hence it is a good practice to know the audience so the infographic can be tailored to its taste. As per Crick and Hartling (2015), "our findings show differences in terms of audience-specific preferences for presentation of research results. Our study supports other research indicating that tools for knowledge dissemination and translation need to be targeted to specific end users' preferences and needs" (p. 2). As an infographic in a technical report is going to look very different from that in a marketing presentation, it is important to select style, look, colors, and shapes such that it is appropriate to the subject matter and the taste of the audience the creator is making it for. It is important that infographic makers never lose sight of the audience or content because substance has always got to determine style.

Another good practice is to remember that less is more when it comes to using infographics. Since infographics are "condensed compositions," busying it up with lots of extraneous imagery or flashy visuals would go against the very rationale for using infographics. It is easy to be drawn to slick, stylish fonts and gaudy lay-outs; therefore, it is essential to remember, as Zaylan (2015) puts it, that "compelling content is the real driving force behind effective visualizations. The best infographics are easy to read, present information clearly and logically, and direct the reader's eye from one section to the next in a coherent, fluid motion" (p. 31). In order to ensure that audiences are not confused by having their attention shifted from one section to the next without any sensible order or rationale, it is necessary to plan and organize data meticulously while creating the infographic. It may be essential to pick visuals that are appropriate and do not overwhelm the content. It is equally necessary to limit words and be mindful of the length and number of sources, as simple is often better when it comes to infographics. Since infographics brings the power of brevity, insight, action, and engagement to the presentation of research, as per Smiciklas (2012), infographics can be used to emphasize specific numbers, statistics, or trends, as well as to show linkages, and the larger picture.

While there are numerous tools to create infographics, the new breed of tools—such as Visual.ly, Easel.ly, Infogr.am, Vengage, Thing Link, Smore, Piktochart—allow faster and easier creation of infographics and enable even users without deep skills in graphic design to create amazing visualizations. For assignments in the classroom, it may be good to use

Piktochart: http://piktochart.com/; Easely: http://www.easel.ly/; and Infogr.am: https://infogr.am/. These programs offer templates and examples with drag-and-drop functionality, so creators can focus their efforts on the concept rather than having to worry about creating the graphics. As software develops, it would be possible to create infographics with even greater flexibility, interactivity, and shareability than we have today. Though Lankow et al (2012) predicted that "the future of infographics" will see an "increased automation of data visualization" (p. 145); it is important that we never underestimate the need and power of authorial vision in creating a memorable infographic. Equally important is the need to make sure that intellectual property rights are respected. It is easy to commit plagiarism unconsciously while using infographics. It is necessary not only to make sure that all sources have been cited while inputting data into the infographics creator but also to double check facts and confirm that the original source of the data has been used. Since it is essential to maintain authorship over the infographics one has created, it may be a good idea to create a single web link (using bit.ly for instance) for sharing.

lnfographics can be woven into inquiry-based learning activities throughout the curriculum that include demonstrating historical, literary, biographical, scientific and art connections. Here are some suggested assignments adapted from those collated by Annette Lamb and Larry Johnson (2014):

1) Social studies connections: Ask students to create their own infographic that ties in the social issue (bullying, drug abuse, etc.) to their realistic fiction book.
2) Historical Connections: Consider introducing infographics as part of primary-source documentation activities. For instance, students can be asked to connect Rebecca Skloots' reportage on Henrietta Lacks to the HELA cells controversy, black history, and development of HIPAA laws.
3) Biography Connections: An increasing number of biography infographics features the lives of famous people. Students can, for instance, be asked to connect Steve Job's life and milestones of Apple Inc., or Shakespeare's themes in his plays with events in his life in an infographics exercise.
4) Science Connections: Students can investigate numerous scientific phenomena and space exploration events by creating infographics on them.
5) Art and Design Connections: Business and Marketing students can create infographics connecting the Psychology of Color in Logo Design and successful brands and branding. (p. 56)

Each teacher can create such assignments for their own disciplines as per his or her own course needs and syllabus requirements. However, infographics are particularly important, if not a must for business and technical writers, since visuals are central and core to writing technical and professional writing proposals, reports, and manuscripts in the real world. Training and encouraging business and technical writing students to use infographics in their proposal and presentation can go a long way, as per Matrix & Hodson (2015), to equip them to do justice to their future roles:

> Since data visualizations are part and parcel of constructing both technical/scientific posters and oral presentation slide decks, it is reasonable to assume that students will [need to] have at least minimal experience communicating visually, gained either from other college courses or high school classes…Therefore the infographic assignment can do triple duty as a research project, a design challenge, and an opportunity to encourage students to develop their technical fluency by experimenting with new software application. (p.19)

Since a design approach is a core requirement for creating infographics for use in business and technical writing projects, it maybe a good idea to teach students to organize their infographic according to L.A.T.C.H and C.R.A.P principles.

6.3 L.A.T.C.H & C.R.A.P. Principles and Rubrics: Discussion

In his book, *Information Anxiety 2*, Saul Wurman (2000) discusses how information anxiety is "produced by the ever-widening gap between what we understand and what we think we should understand," and "happens when information doesn't tell us what we want or need to know" (p. 34). The way to overcome "information anxiety [that is] the black hole between data and knowledge," is to find a structure in the information. Generating visuals creates "access that is the antidote to anxiety" (p. 45). Since brilliant ideas get negated when communicated poorly, it is necessary for students to use L.A.T.C.H. principles to bring order to the information they are presenting. Good design sharpens the message of what is being communicated in the proposal, report, or presentation in a way that is audience-friendly. By presenting the infographic in L.A.T.C.H. form which is close to the way the human mind thinks and learns, the student learns to make his or her communication both persuasive and effective.

While assigning infographic visuals for use in academic, business, and technical writing classes, I peg the assignment on L.A.T.C.H organizational

principles, where L.A.T.C.H. stands for Location, Alphabetical order, Timeline, Category, and Hierarchy. L.A.T.C.H can be used to generate infographics for project writing as the project provides the underlying idea to group data or concepts together. The way to arrange, collate, and link data can be based on what they are or "category," or on where they were found or "location." Data could also be arranged and presented alphabetically or chronologically. When the information does not lend itself to these simpler methods of arrangement, they need to be organized according to levels of complexity. Such a hierarchical way of organization becomes necessary in advanced technical writing in particular.

An alternative method, C.R.A.P., is forwarded by Robin Williams in *The Non-Designer's Design Book* (2015). She talks about how particular attention has to be paid to the actual data before sending it to the infographic program for visual transformation. She suggests going according to a template and planning the transcript with an outline or visual storyboard to start the process. Also, she advocates that text, images, media, and color be used as efficiently as possible according to the four principles of C.R.A.P.. She describes how most designers use "inconspicuous repetition into a visual key that ties the publication together" (p. 49). Just as Repetiton can be a unifying princple, the Contrast tenet can be effective, too, since "our eyes like contrast" (p. 84). "Contrast various elements of the piece to draw a reader's eye into the page (p. 69), says Williams, adding that "for contrast to be effective, the two elements must be very different" (ibid.). Again, while presenting how the principle of Proximity works, she exhorts, "Group related items together" (p. 32), warning that "Nothing should be placed on the page arbitrarily. Every item should have a visual connection with something else on the page (sic)" (p. 33). When explaining the Alignment principle, Williams cautions against using a particular alignment just because it is used as a default (ibid.). Together, Williams' exhortations on C.R.A.P. make for good design which, in turn, leads to effective audience cognition.

In Chapter Eleven of the *Technical writing handbook*, Gross et al (2019) feature a detailed guide on how C.R.A.P. principles can be used to design and present infographics in technical writing. As they explain it, A in C.R.A.P. stand for "alignment," that translates to infographic creators and evaluators needing to give weightage to the way in which the infographic exhibits deliberate arrangement of text. R for "repetition" indicates the creators' knowledge or lack of it of the key points that the project—hence the visual—needs to highlight. If the element of P for "Proximity" turns the spotlight on how like elements ought to be grouped together, C for contrast goes to the other end by weighing in on how contrast has been woven into

the infographic, be it through color, font sizes, or typefaces to name just three possibilities (p. 33-182). In short, Gross et al show with examples what Williams described in her version of C.R.A.P. .

     Rubrics using both L.A.T.C.H and C.R.A.P. priciples are presented in the appendix. When teaching infographics, I devote one class to explaining design principles when introducing visual requirements at a point when students have progressed substantively in their research or project writing assignment. The same infographics can be used in the presentation as well as in the written project document. Just as with the writing, I encourage students to upload their infographics, when ready, to the discussion forums in the learning management system for peer review. This is particularly important in an online asynchronous class where there is an absence of immediate "human" feedback. When students receive peer feedback on their infographics, it helps them improve their infographics' visual quality. As with writing, peer review on visuals improves the infographics substantially. Irrespective of the format in which the project writing class is held, the infographics exercise, with an inbuilt peer review option, goes a long way in improving student understanding and deployment of design learning principles. My business and technical writing students, as much as my academic writing and doctoral students, have incorporated infographics in their business proposals, technical reports, academic treatises, journal papers, or doctoral dissertations to excellent effect and met with rave responses and favorable reviews from their target audiences.

     Infographics are poised to play a larger role in the years to come. As infographics are used in the workplace and is a must-have tool for business and technical writers, it is important for business and technical writing instructors to offer opportunities for their students to learn or hone their infographic creation skills in business and technical writing classrooms. As we move to a universal design learning world, both online and onsite project writing teachers would do well to integrate infographics in their course outcomes if not in their own teaching modes and class presentation repertoire. Institutions, too, need to offer opportunities, training, and support, so the comfort level of all students and teachers, including those studying and teaching project writing classes, in using infographics rises. The time, money, and effort spent is necessary since students develop the knowledge and the skills to generate a wow when they speak and present their infographics in their academic as well as in their upcoming professional careers.

Appendix

COMPONENTS	EXCEEDS EXPECTATIONS	MEETS EXPECTATIONS	NEEDS MORE WORK
COLORS	The color choices enhance the visibility of the infographic. Different saturations of the same color are used wisely.	The color choices are fine, but too many colors may have been used.	The color choices for the infographic are not visually pleasing and detract from the infographic.
LAYOUT	The layout of the infographic adheres to the inverted pyramid style - main point on top, secondary point next, and supporting details at the bottom.	The layout of the infographic includes all three components - main point, secondary point, and supporting details - but is not organized in the inverted pyramid style.	The infographic is lacking one or two of the components of good infographic design - main point, secondary point, or supporting details.
INFORMATION ORGANIZATION	The infographic utilizes one of the LATCH (location, alphabetical, timeline, category, or hierarchy) information organization formats to allow the viewer to understand the information in the infographic.	The infographic utilizes some components of the LATCH (location, alphabetical, timeline, category, or hierarchy) information organization formats, but the cohesiveness of the information presentation is lacking.	No information organization choice (location, alphabetical, timeline, category, or hierarchy) is present in the infographic.
CITATIONS	Full bibliographic citations for all sources used are included.	The URL of sources used are included.	No citations to sources used are included.

MORE INFORMATION ABOUT INFOGRAPHICS IN THE CLASSROOM : http://bit.ly/schrockinfographics

APA citation: Schrock, Kathleen. (2012). Infographic rubric. Retrieved from: http://kathyschrock.net/pdf/Schrock_infographic_rubric.pdf

C.R.A.P. Rubric

CRITERIA	Exceeds Expectations	Meets Expectations	Needs rework
CONTRAST	The infographic make use of contrast in the ways it utilizes color, fonts, and visuals	The infographic make use of contrast in the ways it utilizes color, fonts, and visuals to a large extent	The infographic make use of contrast in the ways it utilizes color, fonts, and visuals to a small extent
READABILITY	Every visual element and written matter is readable	Most of the visual elements and written matter are readable	Some of the visuals and written matter are readable
ALIGNMENT	There is a deliberate and successful arrangement of text and visuals	Text and visuals are mostly arranged well	There is no or little arrangement of text and visuals
PROXIMITY	Like elements are grouped together meaningfully	Like elements are grouped together in most parts	Like elements are not grouped together at all or grouped together in some parts

References

Crick, K., & Hartling, L. (2015). Preferences of knowledge users for two formats of summarizing results from systematic reviews: Infographics and critical appraisals. *PLoS One*, *10*(10), e0140029

Gross, A., Hamlin, A. Billy Merck, B., Rubio, C., Naas, J., Savage, M., & Desilva, M. (2019). *Technical Writing.* Open Oregon Press. Retrieved from https://openoregon.pressbooks.pub/technicalwriting/

Lamb, A., & Johnson, L. (2014). Infographics part 1: Invitations to inquiry. *Teacher Librarian 41*(4), 54-58.

Lankow, J., Ritchie, J., & Crooks, R. (2012). *Infographics: The Power of Visual storytelling*. Hoboken, NJ: John Wiley & Sons.

Matrix, S., & Hodson, J. (2014). Teaching with infographics: practising new digital competencies and visual literacies. *Journal of Pedagogic Development*, 558-564.

Schrock, Kathleen. (2012). Infographic rubric. Retrieved from http://kathyschrock.net/pdf/Schrock_infographic_rubric.pdf

Smiciklas, M. (2012). *The Power of Infographics: Using pictures to communicate and connect with your audiences*. Indianapolis, IN: Que Publishing.

Thompson, C. M. (2015). Creating "visual legacies": Infographics as a means of interpreting and sharing research. *Communication Teacher*, *29*(2), 91-101.

Williams, R. (2015). *The non-designer's design book: Design and typographic principles for the visual novice*. San Francisco: Peachpit Press

Wurman, R. S. (2000). *Information anxiety*. Indianapolis: Que.

Zayan, M. (2015). Create compelling infographics. *Quill 103*(1), 31.

AFTERWORD

HOW TO HAVE A SELF "WITH" OTHERS IN ACADEMIA AND BEYOND

BY MIRIAM JAFFE, PH.D. (ENGLISH), MSW

Associate Teaching Professor in the Graduate Writing Program at Rutgers University, Miriam Jaffe is a prolific writer having authored/ edited four books at the intersection of writing and social work. She is also the Associate Editor of the *Writing and Pedagogy* journal.

Academic writing fosters specific kinds of relationships with others. As the chapters herein collected reveal, there are primary relationships in writing. An important range of primary relationships are established in three chapters: chapter two locates voice as an engagement with an audience for purposes ranging from wide scale social change to individual identity; chapter three presents a model for communication-oriented relationships among scholars; and chapter six offers a model for gesturing with visual cues to relay academic conversations. These three primary relationships among writers and their audiences distill to self and other, where a writer, or self, seeks to be known and understood by readers, others, and seeks to exist in relationship with others who have written. In contrast to the opposing dynamics of self "and" other, this volume points to the idea that teachers of writing must help their students imagine themselves "with" others, and to achieve this goal, one's pedagogy for academic writing must include the relational mindset that Sarbani Sen Vengadasalam achieves here.

In relational psychology, the self must exist in mutually beneficial relationships with others, and academic writing is relational in the same way. Hence, the subject of voice is at the center of Sen Vengadasalam's teaching. Helping students to establish voice is more than a way to help students feel unique, authentic, and true. While the diversity of voice in a classroom means that "every student has the power to be heard," and by extension, that voice "restores equity" in spaces that have been prone to discrimination, it

is dialogism, the back and forth of plural voices, that is more important in academic writing than one's singularity. After all, if students are guided only toward speaking in declarative opposition, then the "crisscross" of listening (or reading) and speaking might never manifest. For a voice to be heard, students must first prove themselves to be willing to engage in the transformative learning experience that Mezirow describes, where voice is apt to grow in relation to other writers' voices. Writing without the reading and the incorporation of not just content, but style, is simply one-sided. Yet as Sen Vengadasalam makes plain, teachers are not to serve as the recipients and adjudicators of this one-sided writing, lest the classroom become an "imperial setup." In the past fifty years, undergraduate writing classrooms have aimed to empower and liberate student voices for the first time, since these students have been teachers' subjects and asked to regurgitate ideas and methods that the teachers have handed down throughout high school.

        Now that the master's degree is the new undergraduate degree, and now that publication for doctoral students is due before the degree is complete, helping students to find their voices is more complicated, more entwined in disciplinarity, and more susceptible to identity loss thanks to "insidership" and poor relationships with supervisors. Scholarly writing at the graduate level is always about scholar to scholar communication. Therefore, presentation standards across fields aid in the digestion of the material in ways that make some writers feel like they have lost agency. Disciplinarity and field conventions should not silo one's creation of new knowledge, however. Most useful to the development of graduate student voice is the use of rhetoricity to organize writing and questioning practices that lead writers to revise for detail, explanation, and clarity, so that writers are more aware of the array of choices they can make at the sentence level and beyond. These choices may contrast with other student voices, and graduate students should be able to explore why they made each specific choice so that, as Sen Vengadasalam says, one moves away from imposter syndrome and "submission." In graduate composition courses, teachers can attain voice by way of teaching with scaffolding and modeling techniques. Scaffolds and models are techniques for connection across fields, and students may deviate from recommended techniques as long as they know why they are doing so.

        Chapter three outlines much of this graduate level pedagogy using Sen Vengadasalam's exemplar syllabus from a writing for scholarly publication course, which makes a case, interestingly, for the benefits of online relationships. Peer review in an online setting, Sen Vengadasalam finds, is particularly fruitful because students must craft their opinions and commit to their ideas in writing with "more time to reflect before posting

comments, which are now there for good, and for all to see" and "audience consciousness." Peer review as a professional skill is best developed in public instead of private, I agree. One on one relationships, especially those that are critical in nature, require the balance offered by the existence of multiple others, as in group therapy. Of course, the online component of a therapeutic relationship takes away from human connection. But this remove is perfect for peer review, which focuses on the writing rather than complicated interpersonal dynamic. Sen Vengadasalam's "strengths-weaknesses-suggestions" guidelines steer reader response away from the person and onto the writing at hand, and the online format mimics the relational aspects of evaluative processes in which "real world" journal editors and reviewers—the gatekeepers of scholarly communication—take part.

Forging strong connections with gatekeepers is challenging, especially in an increasingly online "real world." The screen mediates many writing relationships that are most important to disseminating ideas. The "look" of an idea is key in attracting the audience. In chapter six, Sen Vengadasalam offers her principles for teaching infographics, and in so doing, has drawn up a sort of online "speed dating" for ideas. Appropriately, "LATCH" and "CRAP" organize the dating scene with tactics such as alphabetization, chronology, alignment, and proximity, all of which bond the viewer to the presenter (as does a kind sense of humor). These tactics are all spatial and relational, a Bahktinian chronotope for the 21st century, which helps to guide the reader's eye around the page.

In teaching the art of writing using infographics, the instructor is like a museum guide, helping the writers to form a relationship to writing by showing them around. In Sen Vengadasalam's "Infographics" example of visual storytelling and teaching, we see a model not only for how to make an infographic, but saliently, how to be a "guide." "Infographics in Academic & Professional Writing" takes us on a journey that compares new and old, and therefore, readers find themselves located in relation to the problem at hand. The instructor uses arrows to help the reader follow guidance. The instructor also highlights how to avoid "misinterpretation," "disengagement," and being "laborious to read and comprehend," qualities of any trained guide. Moreover, the instructor offers advice for any good relationship: direction toward a problem rather than a person, meeting others at a place of mutual connection, and accommodating various learning styles. For graduate students who must present at conferences or job talks as part of the professionalization process, there is no better way to present than to be exactly the teacher or guide that Sen Vengadasalam shows us how to be here, with these skills.

        Skillful infographics are also part of online and print publication, especially in the sciences. Writing teachers are often so focused on text that they forget what is at stake in the real world. Furthermore, for graduate students, whose lives are often lived in the abstraction of field absorption, and who must tolerate the ambiguity of learning, the mockup of visual representations of ideas is particularly useful. When I teach abstract skills, I ask my students to draw what they hear me saying. Then, I ask them to teach the skills back to me using their graphics. Finally, I ask them to draw out their own abstract ideas, which they read closely in order to organize the ideas that they want to communicate. Writers are themselves the first audience with which ideas are concretized, so prewriting self-reflexivity is a way to test what one knows and still needs to know. Using the infographic in reverse, as a teaching tool, is another way the teacher can guide the students through the maze of the self as they establish voice.

        One's writing voice adapts for specific purposes over time. As writing projects complexify to cover more breadth and depth over longer periods of time, the writer is becoming a masterful composer, adding more and more lines to a score, not just for a student-teacher duo or student-teacher-general audience trio. Advanced academic genres require that a scholar master composition for the orchestra, attuning to each set of instruments, like a conductor that knows how to conjure song by working *with* the musicians. Likewise, voice, in writing, is not just a projection of the self, but a back and forth that requires the writer to make choices that take special care of a relationship. Outstanding writing teachers help care for that relationship.

        Clearly, Sarbani Sen Vengadasalam is one of those dedicated teachers who attends to the relationship, whose contribution to academic writing pedagogy invites others to participate in her student-in-the-21st-century viable approach. Her sharing of resources in this format, culled from a career in the field, is a sign of her meta-teaching; her syllabi and explication are "how-to" in the sense that with her academic writing pedagogy, Sarbani Sen Vengadasalam calls writers "teachers." In that sense, she is the teacher of teachers.