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Currents in Teaching and Learning is a peer-reviewed electronic journal that fosters exchanges among reflective teacher-scholars across the disciplines. Published twice a year, *Currents* seeks to improve teaching and learning in higher education with short reports on classroom practices as well as longer research, theoretical, or conceptual articles and explorations of issues and challenges facing teachers today. Non-specialist and jargon-free, *Currents* is addressed to both faculty and graduate students in higher education, teaching in all academic disciplines.

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EDITORIAL

Beyond Student-Centered Learning: Recalibrating Agency and Authority in Higher Education

— Martin Fromm

In today's educational climate, college and university instructors are facing ever-increasing pressures and imperatives to adapt comprehensive liberal arts curricula to post-graduation job market realities, equip students with the skills needed to cope with information overload and "alternative facts," and blend technology with face-to-face learning in creative ways. How can we understand the relationship between academic rigor, attention to students' personal and career interests, and the flexible accommodation of student agency? Are there specific instructional methods that can humanize and contextualize the research process for students? If online learning is not the panacea that it once promised to be, what place does technology have in fostering an active and engaged learning environment? The authors featured in this issue introduce innovative concepts and approaches for making the "real" and academic worlds collide in the classroom, grounding academic rigor in personalized and collaborative endeavors, and incorporating technology in ways that enhance critical thinking and active learning.

A central theme running through this issue is the challenge of making often-abstract concepts and theories more tangible, alive, and relevant for students. Springing from ongoing discussions about student-centered active learning, these scholars contend that truly engaging students requires new and more flexible yet comprehensive approaches to structuring time, content, assessment, and the use of technology. Moving beyond the dichotomy between online and classroom learning or between lecture/exam and group activity styles of learning, they envision a more dynamically interwoven relationship between instructor authority and students' personal and interpersonal agency. With access to information now seemingly limitless, these articles suggest

that we reconceive of the purpose of higher education in terms of providing students with the tools and resources to navigate the treacherous waters of contending truth claims and to develop habits of mind and collaborative practices for analysis and meta-analysis of how knowledge is contextually constructed.

While much attention has been focused on the habits and mindsets of millennial students, Nyasha M. GuramatunhuCooper, Jennifer W. Purcell, Shelbee NguyenVoges, Roneisha Worthy, and Marrielle Myers turn our gaze to the up and coming generation of millennial faculty in their contribution entitled "Student Perceptions of Millennial Faculty." Noting the interpersonal, flexible, and technology-oriented style of teaching exhibited by this new cohort, the authors map out some of the challenges they face in balancing connection and empathy with authority in the classroom. The challenges of combining academic rigor with lively, interactive styles of instruction are particularly salient at the pivotal juncture in students' transition from high school to college. In "First-Year Seminar Program Evaluation: A Focus Group Study," Colleen Sullivan and Charlotte Haller employ a qualitative and collaborative "focus group" assessment method to evaluate the First-Year Seminar experience in terms of the balance of academic and orientation needs.

Other contributors in this issue direct our attention to more specific approaches and practices aimed at integrating the goals of academic rigor, authentic learning, and dynamic agency. In "Choose Your Own Adventure: The Quest for Student Agency in an American Literature Class," Amy Getty argues that granting students a greater sense of flexibility, choice, and control in the learning process is critical. Replacing a required set of

readings with weekly options in an anthology-based literature survey course, Getty describes her "ultimate goal" as "making visible students' own choices in attending the class (or coming to college in general), guiding them to self-direction and lifelong learning." Taking us from individual choice to interpersonal forms of agency, Lynne N. Kennette and Alexandra Penn introduce a collaborative approach to exams in "Exploring the benefits of two-stage collaborative exams." They argue replacing traditional exams with a two-stage collaborative exam process reduces student anxiety, simulates workplace teamwork dynamics, and helps students learn materials through benefiting from immediate peer feedback. Inter-peer collaboration and competition are also central to Colby King and Matthew Cazessus' discussion and case study evaluation of the role of "serious games" and game-based learning techniques in inspiring more interactive, real-world simulated active learning that can help students to understand and apply theories. In "Teaching with AudaCity: A Board Game for Urban Studies," they contend that the inter-peer competition, real-world simulated scenarios and role playing, and the inclusion of complex contextual factors in a dynamic game setting make this activity an effective way to apply concepts and theories to real-world situations. Alongside these interactive approaches, Tracy Steffy and Maria Bartolomeo-Maida turn to the interiority of the individual's personal engagement with course concepts and materials. In "Reading and Writing to Learn: Do Required Writing Assignments Promote Reading Compliance and Student Engagement in Social Science Classes?", the authors posit that required, prompted, low-stakes writing assignments have the potential to increase reading compliance, comprehension, and critical thinking by promoting intrinsic rather than extrinsic learning mechanisms. Aside from specific approaches to handling content and assessment, Daniel Beugnet suggests

ways to create more flexible spaces of time in and outside of the classroom in "Impact of a Self-Paced Face-to-Face Format in a Developmental Writing Course." Beugnet contends that pressures in higher education to "cut costs, reduce time to completion, and increase graduation rates" require fundamental "macro-level" changes to the traditional classroom structure, particularly in "critical but costly and time-consuming areas such as developmental education," that bring together "flexible physical spaces," face-to-face instructor-student interaction, and "rich online experience." To this end, he introduces a combined self-paced, flipped learning approach that, according to his findings, allows for greater student agency, flexibility, control, as well as more effective use of resources.

While the flexible and dynamic reorientation and restructuring of learning is a central theme of this issue, several articles also point to the importance, in an information-saturated world, of helping students to critically navigate and make sense of a continuous barrage of competing voices and content noise. The urgent task of cultivating information literacy is the subject of "Moving Beyond Opinion and Assumption: An Information Literacy Activity to Foster Students' Critical Thinking about Popular Press." Stefanie Sinno and Jennifer Jarson, in their respective roles as psychology faculty member and librarian, utilize a constructivist approach to guide students "from concrete summarization of the sources to metacognitive thinking." Incorporating popular press articles into course-related content, the authors discuss how a series of deepening interrogations of the popular press articles' knowledge claims led the students to develop and apply insights about the contextual and constructed nature of knowledge. Information literacy is also key to Susan Dominguez and Mark Eddy's study entitled "Humanizing the Research Pro-

cess: Collaborative Teaching and Academic Conversation." For Dominguez and Eddy, the problem with not understanding the contextualized nature of knowledge production results in students' tendency to view sources as "piles of data." Integrating "active learning strategies, embedded library services, and online assessment tools," the authors propose a rigorous, scaffolded process of "knowledge discovery" and source evaluation that leads students toward "a contextualized understanding of how sources represent parts of ongoing conversations among researchers, scholars, and other discussants, rather than static repositories of facts and information." If students are to approach sources as parts of ongoing conversations, Robert Sidelinger suggests that instructors are faced with the task of constructing an engaging dialogue between instructor and students. In "Dialogic Pedagogy in the College Classroom: Overcoming Students' Negative Perceptions of the Talkaholic Teacher," Sidelinger suggests that in less-than-ideal cases where the instructor's talkativeness threatens to deter student communication and engagement, the relevance of content to students' personal and career interests is at least a tempering factor. While the concept of "active learning" places engagement and application at front and center as a student-centered enterprise, Sidelinger's study reminds us of the powerful, emotive role of the instructor-student relationship in the learning process.

I would like to extend my thanks once again to all who have made this issue possible, particularly the team of referees and copy editors who contributed their time to strengthen the quality and clarity of scholarship. They are, in no particular order, Robert Sidelinger, Sharon Yang, Cleve Wiese, Wendy Holliday, Vicki Gruzynski, Jamie Remillard, Bonnie Orcutt, Lisa Kramer, Danette

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Note on Issue 9(2): In the previous issue, several errors initially appeared in Faggella-Luby, et al, "Universal Design and College Students with Disabilities: Does the data Equal the Zeal?" They have been corrected in the current version published online.

Student Perceptions of Millennial Faculty

— Nyasha M. GuramatunhuCooper, Jennifer W. Purcell, Shelbee NguyenVoges, Roneisha Worthy, and Marrielle Myers

Dr. Nyasha M. GuramatunhuCooper is a Leadership Studies scholar and educator. Her research and teaching explore connections between leadership and cultural contexts. In advancing the field of Leadership Studies, her work advocates for the addition of non-Western contexts of leadership by exploring the leadership narratives, experiences, and voices in Africa.

Dr. Jennifer W. Purcell is a Leadership scholar whose research explores capacity building for community engagement in higher education. In advocating for the public purpose of higher education and its contribution to the common good, her work explores strategies for developing community-engaged scholars and educators and developing organizational infrastructure.

Dr. Shelbee NguyenVoges is an educational scholar specializing in intercultural and international experiential education. Central to her work is academic and social adjustment within multicultural contexts. Her research interests place importance on sociocultural influences to the learning environment, study abroad participation, and the practice of adult learning theory.

Dr. Roneisha Worthy is an environmental engineering scholar and engineering educator. Her research interests include early formation processes of engineering and the impact of early STEM intervention. Dr. Worthy's industry experience includes work as an environmental engineer/planner with companies such as Gresham, Smith and Partners and General Motors Corporation.

Dr. Marrielle Myers is a Mathematics education scholar who focuses on social justice and creating equitable experiences for historically marginalized students. To that end, her scholarship focuses on the preservice teacher preparation needed to produce equitable teaching practices in K-5 mathematics instruction.

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Student Perceptions *continued*

Abstract

Our study examines how college students perceive millennial faculty. In exploring how students perceive millennial faculty, the model of interpersonal teacher behavior provides a framework from which to organize and categorize millennial faculty behaviors as reported by students, and to discern how they impact the student-faculty relationship. Our findings indicate that students generally have a favorable perception of millennial faculty. Through qualitative analysis, emergent themes such as the use of technology to teach and communicate, flexibility and adaptability in classroom management, and teaching personas, as well as use of communication styles and language to establish connections with students indicate positive perceptions of millennial faculty. The findings of our study serve as a useful resource for new millennial faculty as they develop their teaching practice and create a new knowledge base for a topic that has not been previously explored.

Keywords

millennials, students, millennial professors, teacher behavior

Traditionally, higher education has been a site for intergenerational learning. McNeill (2011) notes that the silent generation (born 1925-1942), baby boomers (born 1943-1960), Generation X (born 1961-1981), and millennials (born 1982-2002) have interacted in the classroom, with the first three generations taking on the role of professors, and the millennials taking on the role of students (pp. 2-3). However, a cultural and social shift has taken place as millennials (who were once firmly fixed in the role of students) are now becoming faculty members and teaching their generational peers (Johnson, 2006). Resources on millennials have become a common feature of college and university libraries, with many proclaiming best practices on how to reach or teach millennial students (2006). This trend suggests that discourse about millennials and higher education has been confined to millennials as students, yet they now occupy learning spaces as both students and faculty (Kelly, 2007).

Given interaction in the classroom among generational peers, it is surprising that there is little to no scholarship examining millennial faculty and their relationships and/or interactions with students. A survey of scholarship shows great effort to describe the characteristics and qualities of millennial learners and specific teaching strategies that are deemed effective and appropriate when teaching millennial students (Bonner, Marbley, & Howard-Hamilton, 2011; Garner, 2007; Price, 2009; Stewart, 2009). Existing scholarship is oriented towards baby boomer and Generation X faculty and staff, leaving newly minted millennial faculty with little to no resources to navigate professional and personal relationships with their generational peers (Kelly, 2007). While there is an abundance of scholarship pertaining to millennials as employees (Alsop, 2008; Bannon, Ford, & Meltzer, 2011; Chou, 2012), this scholarship does not sufficiently address the nuances of millennials as university faculty.

Millennial faculty have been raised in a different cultural and historical context, signifying different worldviews from their colleagues (Howe & Strauss, 2000). A reasonable assumption might be that millennial faculty and millennial students have much in common, with generational values that might include collaboration and teamwork, free speech, informal relationships with authority figures, creativity encouraged through work-life balance, and use of technology in personal and professional interactions (Johnson, 2006), as well as shared language, habits, ideologies, and experiences (Howe & Strauss, 2000). However, points of similarity are complicated when the relationship shifts from generational peers to student and professor. These perceived shared values are further complicated considering the differences in educational achievement, training, and professional experiences between students and professors.

A review of scholarship shows an emphasis on defining who is considered a millennial, articulating generational characteristics, and describing how to interact with them in the workplace as employees and in higher education as students. The general trend has been to identify their perceived characteristics and needs, which has led to most scholarship emerging as a code book or manual on how to manage millennials. According to Eckleberry-Hunt and Tucciarone (2001), millennials "have been a highly protected and overscheduled generation" who have been "raised by parents who told them they were special and winners" (p. 458). The same authors (echoing Johnson, 2006) also note that millennials value online social connectedness, teamwork, free expression, close relationships with authority figures (as they had with parents), creativity, work-life flexibility, and use of technology (p. 458). This is a broad generalization, which is a theme that is prevalent in discourse on millennials across various fora.

Continuing their assessment of millennials, Eckleberry-Hunt and Tucciarone (2001) share that "educators tend to view [millennials] as lazy, unmotivated, and selfish, and this view is shared in the business world" (p. 459). These descriptions are problematic and pedestrian in that they depict the millennial generation through a singular and hyperbolic lens, which misses the nuances and complexity of the lived experiences of millennials. Johnson (2006) astutely noted that when assessments are offered about who and what the millennial generation is, the core sample is White, middle to upper class, and in predominantly Western contexts. This is particularly important to note because it offers what Chimamanda Adichie (2009) calls a "single story," which is a simplistic and incomplete perspective that when constantly repeated and consumed through various channels, turns into a type of discursive imperialism of the people, places, things, and events being studied. When we take into account social and cultural contexts, it is worrisome and, moreover, impossible to insist upon a definitive way of understanding millennials. Although scholarship shows what might appear to be a definitive list of characteristics for each generation, it is important to remember that not every member of a generation will exhibit all of the characteristics associated with a particular generation.

Research Question

Charalampous & Kokkinos (2014) noted that "The contribution of student perceptions of their teacher's interpersonal behavior to the improvement of their academic and affective outcomes has been documented in many research studies in the past" (p. 236). A number of studies support this claim, most notably Arends (2001) and Roach, Richmond, and Mottet (2006). Yet, there is no existing work that intentionally examines the generational characteristics of teachers that may play a part in how students perceive their interpersonal behaviors. Our work marks an opportunity to develop this area of inquiry. Specifically, this study emerged from a faculty learning community of millennial tenure-track assistant professors with the goal of understanding how students perceive millennial faculty. This is an important inquiry whose results can positively impact classroom interaction as well as faculty development. Though this particular study focused on a small sample of undergraduate students from one institution in the United States, this research question can be explored across institutions and populations to advance scholarship on this topic.

Researchers' Positioning

Sikes (2010) noted that in maintaining a standard of ethics regarding their work, researchers and writers must clearly indicate "where they are positioned in regard to their work" (p. 19). Explaining one's position includes revealing the origin of interest in the topic, how the topic relates to personal experience, and a clear synthesis of the particular methodology and theoretical lens to be employed. We are early career millennial faculty at a large public institution in the United States, and our disciplinary backgrounds include leadership studies, education, adult education, and engineering. In addition to experience in academia, we have each spent time outside of the academy in professions related to our identified scholarship and interests. We occupy a unique position as the researchers and subjects of our work. As millennial faculty, we are finding our place within the academy and learning how to nurture and develop our teaching practice. After responding to a call for proposals from our institution's Center for Excellence in Teaching, we were selected to form a faculty learning community centered on our shared experiences as millennial faculty. During our time together, we discovered that there was no scholarship related to millennial faculty and their experiences. We therefore saw an opportunity to contribute scholarship that adds to our understanding of changing faculty demographics within higher education, but more importantly, provides a timely resource for millennial faculty as they develop and refine their teaching skills and personas.

Theoretical Framework

To understand how students perceive millennial faculty, our work utilizes Wubbels, Créton, and Hooymayers' (1985) model of interpersonal teacher behavior. In its inception, this particular model provided a way of understanding certain teacher behaviors that could positively or negatively shape the classroom environment (p. 2). Several studies have examined how perceptions of teachers' interpersonal behavior are connected to other elements of the teaching and learning environment (den Brok, 2001; Levy, Rodriguez, & Wubbels, 1992;

Rawnsley, 1997; Brekelmans, Sleegers, & Fraser, 2000). Though the model of interpersonal teacher behavior was developed within the context of primary and secondary education, it provides a useful lens to understand the impact that professors have in the tertiary classroom, particularly as assessment of teaching effectiveness is a critical part of the tenure and promotion process.

According to van der Want et al. (2015), the model of interpersonal teacher behavior emphasizes the value of understanding the interpersonal relationship between students and teachers and its impact on the learning environment. For the purposes of our work, this relationship is based on the perceptions that students have of their millennial professors, and thus affects interactions in the classroom. These perceptions are important to consider because they come from how students view and understand the world. Such "existing schema and scripts" (Charalampous & Kokkinos, 2014, p. 239) impact how students attribute and interpret teaching behaviors of millennial professors.

The model of interpersonal teacher behavior (Wubbels et al., 1985) categorizes teacher behavior along two specific dimensions: influence and proximity. Zhu (2013) explained that "The influence dimension represents the degree of dominance or control displayed by the teacher, while proximity describes the level of cooperation between teacher and students" (p. 400). It is important to emphasize that both dimensions are grounded in the perspectives of the students. The influence dimension denotes instructional-methodological behaviors, such as curriculum choices, classroom organization decisions, grading processes, the facilitation of the learning processes, and content delivery methods (Wubbels et al., 1985, p. 2). The proximity dimension is dedicated to interaction, which also includes assessing a teacher's personal values, emotions, and attitudes as key elements that positively or negatively influence relationships with students (Zhu, 2013). In assessing student perceptions of millennial faculty, we use the two main categories of influence and proximity to understand the data collected.

Method

Since perceptions are varied and highly contextual, qualitative inquiry provides more flexibility in collecting and analyzing data that address our research question. Webster and Mertova (2007) noted qualitative inquiry is better suited to address the "issues of complexity and cultural and human centeredness in research" (p. 3). While other methods may be useful in relaying "understandings of studied subjects or phenomena," qualitative inquiry examines "underlying insights and assumptions" among individuals and groups (pp. 29–30). While not denigrating the value of quantitative methods, Webster and Mertova (2007) pointed out that when it comes to "complex [human centered] issues," quantitative methods do not readily allow for examination, analysis, and interpretation of personal and social experiences (pp. 3–5). Understanding the complexity of human interaction and experience rendered within the classroom space requires sensitivity "to the subtle textures of thought and feeling, which are not readily accessible in more standard forms of research" (p. 7). In this study, quantitative methods would not have been useful in eliciting the perspectives of students.

Participant Population

The participants in this study were students at a large four-year institution in the Southern region of the United States. Data for this study were collected from a sample size of 31 students organized into four focus groups (1, 2, 3, and 4). Focus Group 1 consisted of four upper division students (self-identified as juniors and seniors, with two non-traditional students in the group). Focus groups 2, 3, and 4 consisted of 27 lower division students (identified as freshmen and sophomores). We used "purposive non-random sampling" (Creswell, 2007), which allowed us to be intentional in choosing a sample to fit a particular criterion (Patton, 2002). In this case, we wanted students who had been taught by millennial faculty. Since we identify as millennial faculty, we approached students who had previously taken a class with us or were currently enrolled in a class with us. This selection criterion ensured that students would be able to speak directly to their first-hand experiences

with millennial faculty. Furthermore, the selection criterion illustrates purposive sampling in the sense that it allowed us to seek participants who we knew had the specific traits that we wanted to study (Nardi, 2006). In an attempt to eliminate researcher influence on student responses and to attend to the ethics of conducting research, focus groups were conducted by research team members who had no prior connection with the students. For example, students in Focus Group 1 were known to a particular research team member through previous courses, so another research team member conducted the focus group interview and coded the data.

Focus groups were particularly useful for our study because they allowed us as researchers to enter into a dialogue and exchange of ideas related to our research question (Greenbaum, 1998). Though Greenbaum suggests that focus groups can vary in size, time, and purpose, we chose to use groups with four to nine participants to allow for rich dialogue in an intimate setting (familiar classroom space) and allotted an hour for guided conversation. Food was also offered to the participants as a way to create a more inviting and informal space, and as an attempt to decrease the power distance (Hofstede, 2011) between the researchers and the participants. Even though the participants were not in a course taught by the assigned research team members, we were cognizant of the fact that the student-faculty relationship is inherently one of high power distance, even when this is unspoken.

To promote a rich and robust data set, a unique approach to complementary data source collection was utilized via a modified chalk-talk approach. Chalk-talks are a tool for formal and informational group discussions, using a chalkboard to generate thinking on a particular topic (Brookfield & Preskill, 2016). In a typical chalk-talk, the researcher introduces a word, event, or phrase on a chalkboard, then participants are invited to write down corresponding thoughts spurred by the prompt. The result is visible generation of thoughts and ideas related to the topic (p. 13). For our study, participants were given note cards in place of a chalkboard as an outlet to reflect privately on five protocol

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items. These written reflections served as a foundation to share perspectives within the focus group. This eliminated the tendency for participants to feel as though they needed to accurately recall questions at a later time, decreased the tendency for group think, and also promoted consistency in responses (p. 16). For example, participants were asked, "In your opinion, what are the characteristics of millennial faculty? Be concrete." Participants were prompted to write down their thoughts in response and reminded that there was no right or wrong answer. Focus group proceedings were recorded with the full consent of participants after reviewing the consent form.

Focus group proceedings were transcribed and yielded approximately 28 pages of data for analysis. Individual transcripts were created for each focus group and were coded and analyzed for emergent themes using the constant-comparative approach (Glaser & Strauss, 1967). A coding structure was developed in order to facilitate the constant-comparative technique by grouping "answers to the common questions [and] analyzing different perspectives on central issues" (Patton, 2002, p. 376). It is important to note that part of the coding and analysis process included identifying emergent themes within the context of the two dimensions of the model of interpersonal teacher behavior: influence and proximity.

Results

In this section, we present the results from our data in terms of the following emergent themes: use of technology, classroom management, use of language, relationship with students, and teaching persona.

Use of Technology

From the data collected during focus groups, it was clear that the use of technology was a common trait of millennial faculty. Participants noted the use of YouTube, Facebook, Twitter, Instagram, and Snapchat as platforms commonly used by their millennial instructors. Several

participants remarked on the frequent use of Twitter as a communication mechanism to remind students of due dates. Participant D in Focus Group 2 noted: "I've even known teachers to have Twitter accounts and they will tweet out things about the class like: don't forget we have a test tomorrow or hey, there's this fair. You should go." Aside from social media platforms, many students found the diverse methods of lecture delivery to be beneficial. Participant A in Focus Group 4 remarked that one millennial instructor "talked with Prezi in the background and didn't read straight from the slides."

Participant G in Focus Group 2 explained that a particular millennial instructor had "different methods to how she taught things. She'd write things with the screen or she'd verbally communicate it, and then she'd email the students." Participants reported that millennial faculty were more inclined to use learning management systems for grade notification or use email to communicate. For example, Participant B in Focus Group 1 stated, "I think they're more reliable [in responding] to an email. They just make it their priority to respond in a timely fashion if you send them an email."

While most discussions within the focus groups surrounding the use of technology were positive, there were some negative elements mentioned by participants. Participant C in Focus Group 1 noted the gap in technological literacy between millennial faculty and non-traditional students (self- identified as older than the millennial professors in the study and returning to college after more than 10 years of career and life experiences). This led to difficulties in accessing content, which frustrated the student. Participant A in Focus Group 1 (self-identified as a non-traditional student) found the use of blogs and other virtual discussions as "cumbersome" and noted that these types of virtual interactions "contribute little to student learning." Participant C in Focus Group 1 commented on unfamiliarity with the various platforms and alluded, again, to the gap in technological literacy between millennial faculty and non-traditional students.

Class Behavior Management

Focus group participants presented diverging opinions on this topic, but several focal areas arose during discussions. Participant E in Focus Group 3 noted that when a learner had "an idea that sounds good, the [millennial faculty member] was willing to go off that idea and maybe switch what the class was doing." Participant I in Focus Group 3 offered more detail:

> I feel like millennial teachers are more willing to stray from the structure. We have to do this on this day and this day. They're kind of like, if somebody [shows] interest or something, they're like, 'Well, let's focus on that,' and will adapt it.

Participant B in Focus Group 1 described millennial faculty as "more fluid," however, this fluidity within the classroom had a negative impact on some learners. Participants A and C in Focus Group 1 saw the classroom behavior management of millennial faculty as "pushing boundaries" and saw this as "not a good idea." Participants A, C, and D in Focus Group 1 cited the allowance of profanity and references to sex and sexuality as areas of concern. Participant A shared:

> Well, it was pretty graphic because we were talking about . . . it was a wellness course. We were talking about relationships. And mind you, the next person is probably 15 or 20 years younger, so I'm coming from a different place. But they were talking about sexual situations. They were talking about abuse, everything. I don't really want to use the language they were using. I thought I was hearing things. I turned around and then the instructor was fine with it and they were going back and forth. And it just kept happening. It kept happening. And I finally had to say to myself this is a new day.

Another theme emerged regarding tolerance of classroom distractions. While Participant B in Focus Group 1 noted that millennial faculty let students "use technology" in the classroom because "it's natural," others (Participants A and C in Focus Group 1) noted device

usage during classroom instruction as a distraction. Participant C in Focus Group 1 characterized classroom environments as "chaotic" at times, citing some millennial faculty's allowance of "side chit-chat." Conversely, Participant D in Focus Group 1 found millennial instructors to be "strict" and "directed," recalling an experience of a millennial instructor who "writes an agenda" for every class meeting.

Use of Language

The language that millennial faculty use to communicate emerged as an interesting theme in which participants voiced divergent opinions. Participant A in Focus Group 1 summarized experiences with millennial faculty as: "they just use hip terminology." The participant explained further:

> I guess I shouldn't say be hip, but they just use the hip terminology. Trendy language. . . . I have children who are in college too, so some of my classes I've experienced these young millennials being my instructor. When they use certain language, some of the young ones understand it, and they blend with the young folks. They understand what is going on in the media.

Participant D in Focus Group 1 reported concern with understanding some of the language used by millennial faculty:

> The millennial [faculty] seem to just use a generic or a common term and maybe you should know it, but maybe you don't know it, that's why you're in the class. And if nobody says anything, you're onto the next one. And the next thing you know, you turn around, you're behind and you don't know what's going on. You don't understand it because you didn't understand from Jump Street [or from the onset of the discussion].

Relationships with Students

In reviewing the data from focus groups, we noted an overall theme of student-faculty relationships. Participant A in Focus Group 3 commented positively on "the fact that a millennial professor opens themselves up and makes you feel like, okay." Participant E in Focus Group 3 substantiated this point stating, "They're verbal, more casual with us." Examples of this behavior included engaging in casual conversation while taking roll versus passing around an attendance sheet and moving on to the day's content.

Participants shared impactful encounters with millennial faculty. Participant H in Focus Group 4 recalled how a millennial faculty member adjusted the working day's schedule to meet: "She purposefully made time for me." Related to this sentiment, participants also brought up their perceptions of millennial professors' awareness of their students' lives beyond the classroom. Participant B in Focus Group 2 recalled a particularly impactful exchange: "She asked about my dog. It was just so cute. Like, she knows who I am." Participant C in Focus Group 2 reflected that millennial faculty "inspire you to do what you need to do" by revealing their own personhood and experiences. Participant D in Focus Group 3 shared an experience identified as "one of [her] favorite things" done in class. The participant described peers assembling in a circle and putting their arms around each other. They went on to take deep breaths and meditate "to get rid of stress before an assignment."

Teaching Persona

When asked to describe how millennial professors teach, participants noted their perceptions in terms of their experiences with non-millennial faculty. Participant A in Focus Group 2 described millennial faculty as more "flexible" and non-millennial faculty as more "rigid." Participant D in Focus Group 2 offered this observation:

> Millennial teachers grade easier. Like, they won't pass you but they'll be more lenient. Like an example: I had an older math teacher and a younger math teacher, and in the older [teacher's] class, he

just . . . if you got the answer wrong, it was just wrong. But my younger professor, if we did it . . . if we messed up . . . but we did the calculations correct, then she would give us credit for that. Younger teachers are more fluid. Like, they'll work with you more.

This idea of flexibility continued with examples about approaches to teaching and engaging students. Participant A in Focus Group 4 shared the following:

> Yeah, even in my lecture class with a millennial teacher . . . I still was into everything she was saying. I was listening. I was keeping up with it and I did pretty well in that class than any other lecture I'm in. I don't pay attention. I can't focus or something because it's like they read off of the PowerPoint.

Echoing this same sentiment, Participant E in Focus Group 2 described millennial faculty as:

> More interactive with students in their classroom. Instead of doing a basic lecture or PowerPoint, they try to find different . . . ways to do things because they know from experience that message might not engage us as much because they come from our generation, so they find different ways to keep us engaged and kind of help us learn.

Some participants provided examples of nuanced teaching personas projected by millennial faculty. Participant H in Focus Group 2 remarked: "It's easier for me to connect with them. They want me to get involved because they're so excited about what they are talking about and what they're showing us." Recalling a class experience with a particular millennial professor, Participant D in Focus Group 2 reflected:

> I think the way that, like, Dr. X said it, she's the facilitator but we're really in charge of our education and she's just there to facilitate it. It's like an adult learning center . . . it's our responsibility and we can do it. She's just there to help us and motivate us in the right direction but lets us do it in our own way because she recognizes that how I learn may be different from how Taylor and Emily learn.

Participant D in Focus Group 3 echoed this sentiment:

> The way she presented herself was like I'm not the teacher that you can't approach but I'm more like one of you guys and I'm here with you to help you learn and to learn with you because she understands that sometimes we can teach her stuff and she's teaching us. It's like a back and forth relationship.

Participant B in Focus Group 1 noted:

> The experiences I've had with the few millennial professors I had was they rather you speak more. Although they're going to teach, they want to hear from you more and hear what you have to say, your opinions on certain issues, and they don't mind bringing in social matters into the course to help you be able to understand more so that helps my learning.

Conversely, Participant A in Focus Group 1 commented: "I've done better academically with instructors who were older." Participant B in Focus Group 1 noted: "It was shocking to see a lot of these millennial professors because I wasn't used to any of that. It's just totally brand new. But I prefer my older professors." When asked to explain this preference, the participant noted simply being used to having older professors in previous courses.

Analysis

In this section, we analyze the results presented, specifically discussing the results as related to the two categories of the model of interpersonal teacher behavior: influence and proximity.

Influence

An example of the influence dimension of the model of interpersonal teacher behavior (Wubbels et al., 1985) is use of technology and classroom behavior management. Throughout the focus group interviews, the use of technology was a common trait amongst millennial faculty. For example, millennial faculty incorporated social media platforms into their classroom instruction and used social media as a vehicle for communication. These traits align with the most recent literature, which

characterizes millennials as technologically savvy and connected (Sharer et al., 2016; Stewart, Oliver, Cravens, & Oishi, 2017; Turner, Prihoda, English, Chismark, & Jacks, 2016). It should be noted that millennials themselves accept their ease with technology as a distinguishing quality of their generation both in and out of the classroom (King, 2016). In using technology, millennial professors referenced in the study used technology as a means to influence communication, pedagogy, and content delivery.

In these instances, millennial faculty were not necessarily dependent on technology, but used it (in addition to other methods) as a tool to enhance the classroom experience. Research in the area of blended technologies (e.g. learning managements systems, smart boards, class response systems, etc.) confirms this notion and asserts that such techniques have established strategic pathways for faculty enabling them to address the needs of millennial students (Giddens, 2007; Humphreys, 2012; Lapinski, Gravel, & Rose, 2012). Sweet, Sweet, and Fedel (2013) noted that technology can enhance the delivery of content in the classroom and enable millennial instructors to address different learning styles. Furthermore, "blending of technologies gives [millennial faculty] the ability to reach out to and attract potential students who, due to work, family obligations, or mobility issues, are unable to attain a higher level of education in the conventional way" (p. 18). While most discussions around technology within the focus groups were positive, there were some negative attributes mentioned, such as the technology literacy gap between millennial faculty and non-traditional students. This led to difficulties in accessing content, which frustrated students who were not as well versed in instructional technology. This is critical to acknowledge, because gaps in technology literacy between students and their professors may impede the influence dimension, particularly when professors may be unaware that the gaps exist.

The use of technology in teaching signals a shift in the zeitgeist and a corresponding shift in the ways in which classrooms are managed by those in the teaching profession. In light of shifting social norms and expectations

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Student Perceptions *continued*

of classroom decorum, millennial faculty were noted to be open to freedom of expression, reflection, and different ways of knowing and being in an open and collaborative learning environment. King (2016) expounds on the notion that millennials are more socially tolerant of diversity and difference. While social tolerance is not synonymous with political correctness, the notion of freedom of speech might explain the openness of millennial faculty to classroom behaviors that could be considered socially inappropriate by other generations. Interestingly, some non-traditional participants (Group 1) saw this openness as an attempt by millennial faculty to "fit in" with millennial learners. Conversely, millennial focus participants (Groups 2, 3, and 4) attributed this same openness to faculty members attempting to relate to students.

Proximity

We identified the following three themes as markers of the proximity dimension of the model of interpersonal teacher behavior: language, relationship with students, and teaching persona.

Professorial communication styles set the tone for the intended learning environment while shaping interpersonal boundaries and norms for interaction (Frisby & Martin, 2010). Consistently, participants remarked that millennial faculty demonstrate unique communication styles and language. Further, participants reported a communication style among millennial faculty that may reflect a shifting of norms in student-faculty communication and engagement. Participants noted that millennial professors use "hip" and "trendy" language. This may be a generational marker that can be attributed to millennial professors taking on the characteristics of their generational peers; however, there is also another avenue to pursue in terms of this "hip" and "trendy" language as a function of culturally relevant pedagogy (CRP). Culturally relevant pedagogy has been widely researched and discussed in K-12 settings (Ladson-Billings, 1995). While this instructional approach is not as widely examined in higher education, the premise of

CRP is that instruction draws on the lived experiences of students, and this may include the use of language in specific ways. Pinder-Grover and Growsaurth (2009) suggest that the best way to reach millennial students is to facilitate cooperation, cultivate knowledge creation, and promote active engagement. Our data showed that millennial faculty and their use of "relevant language" helped some students better relate to course content. However, as diversity across student populations increases, some students saw this use of "hip" and "trendy" language as problematic, as students come from different backgrounds and may not be familiar with this type of language. In this case, the quest to relate to students through language might actually serve as a barrier for some students. Other attempts to create personal connections have proven to produce more positive results.

Borges, Manuel, Elam, and Jones (2010) suggested that millennials have an affinity for mobile and instantaneous communication to create connections in personal and professional spaces. Bart (2011) offered that millennials appreciate it when professors reveal shared interests and they seem to be more willing to pursue learning outcomes when instructors connect with them on a personal level. Although faculty who teach millennials may already be connecting with their students on a variety of personal levels, millennial faculty who teach their generational peers as well as the next generation should be aware of the expectation to connect in both digital and face-to-face modalities.

Borges et al. (2010) and Bart's (2011) points about the kind of environment and relationship millennial learners expect from their professors are brought to the fore by our participants' reports that millennial faculty create more relaxed learning environments by, for example, engaging students in conversation that may be tangentially or non-related to course content. However, we recognize that such a learning environment does reflect a shift in classroom power dynamics. Although students may welcome the shift, such changes in the student-faculty relationship may create challenges when professorial authority needs to be asserted such as if a student later

wishes to informally or formally pursue a grade appeal. In such cases, a student may misinterpret a millennial faculty's willingness to "sit down, have a conversation about studies or personal life" as professional leniency.

Alongside these student perceptions, faculty members often have a carefully crafted teaching persona they hope to project to students enrolled in their courses (Curzan & Damour, 2000). Participants positively remarked on the ability of millennial faculty to adapt to a changing classroom environment using terms such as "flexible" and "easy going." Upon reflection as a group, adaptability and perhaps less prescription in our content delivery and classroom management could be expected due to the novelty of the work. We are just now securing university-teaching positions as millennial faculty and are at the beginning of our careers. There is room to question whether this perceived novelty will continue as our careers progress with increased expectations in teaching, research, and service.

Data collected in this study suggest students who work with millennial faculty perceive nuanced teaching personas, and further, that these nuanced personas impact the learning environment and academic performance. More importantly, value judgments associated with these observations and perceptions showed a favorable interpretation by millennial students (Groups 2, 3, and 4), and a less than favorable interpretation by self-identified non-traditional students (Group 1). Within our focus groups, millennial students framed the millennial professors as facilitators who are flexible and engaging, which seemed beneficial to establishing relationships and perhaps is indicative of what millennial students expect from faculty. Examples of shared power, engagement, and differentiation in instruction were prevalent among focus group participant comments. Non-traditional participants noted a preference for non-millennial faculty, noting that they performed better academically with non-millennial faculty.

Limitations

Intersectionality

The differences in perceptions presented in our work suggest that students view millennial professors through social schema that categorize individuals according to their generational markers, and they expect professors to fit into certain archetypes. Although we analyzed results from all participants in the study to obtain these themes, we did not further disaggregate the data by race, gender, citizenship, and other identity markers. Jones and Wijeyesinghe (2011) argue that no social issue can be "fully understood by focusing on one aspect of identity" and that "focusing on multiple identities held independently while added to each other, is a cornerstone of intersectionality" (p. 12).

The theoretical construct of intersectionality states that our race, ethnicity, class, gender, religion, and sexuality all influence our lived experiences, the way we perceive the world, and the ways in which we are perceived (Collins & Bilge, 2016). To better explore issues of intersectionality, future interview protocols could include more targeted questions that address race, gender, religion, sexuality, etc.

Perceptions of Generations of Faculty

This study narrowly focused on student perceptions of millennial faculty specifically due to our own positioning as millennial faculty and the social and cultural focus on millennials. We recognize that faculty closer to their students' generational cohort may easily build rapport through shared experiences and understanding, therefore the premise of our work is not limited to just millennial faculty. Certainly, faculty representing the baby boomer cohort once had similar experiences early in their careers. Future faculty representing the Generation Z cohort, those born between 1995 and 2010 (Seemiller & Grace, 2016) will contribute an additional layer of distinction among the faculty ranks. Our preliminary findings of student perceptions of millennial faculty may inform future research comparing student perceptions across generations.

Conclusion

Our work serves as a resource for new millennial faculty who are new to the academy and nurturing and developing their teaching practice. Through the use of Wubbels, Créton, and Hooymayers' (1985) model of interpersonal teacher behavior, we were able to understand how students perceive millennial faculty. Specifically, we identified certain teacher behaviors that could positively or negatively shape the classroom environment. Of note is the positive perception of the use of technology to teach and communicate, the integration of flexibility and adaptability in classroom management and teaching personas, as well as the use of communication styles and language to establish connections with students.

It is important to note that there is a degree of agency one has in crafting a teaching practice, therefore, the findings presented in our work are to be considered as a resource rather than recommendations. For new millennial faculty, knowing student perceptions can be useful data that fosters reflection on how particular teaching personas, styles, or tools can impact teaching and learning. Understanding student perceptions can help millennial faculty think about how to create a balance between influence and proximity behaviors (Wubbels et al., 1985) so as to create a positive environment that supports and challenges students, and offers opportunities for professional growth for the faculty member.

Many institutions have centers for excellence in teaching and learning, and there are a variety of teaching-focused research and practice-oriented conferences at the state, regional, and national levels that cater to new faculty. These professional development spaces nurture reflection and growth (Calkins & Harris, 2017), which can be a useful tool in managing student perceptions and responding with effective influence and proximity behaviors (Wubbels et al., 1985). The findings in our study may serve as a resource for the aforementioned professional development spaces to consider creating specialized materials or sessions that cater to the generational groups among new faculty. Generation Z faculty will be entering the academy as faculty and may have the same sort of questions and experiences we have as millennial faculty.

We return to our purpose: to provide a resource for new millennial faculty as they develop their teaching practice and create a new knowledge base for a topic that has not been previously explored. We are hopeful that millennial colleagues from various institutions will add to the knowledge that we have shared as they consider how their own students perceptions influence the teaching behaviors they employ. We are also hopeful that there will be more discussions about generational shifts among faculty and how institutions can provide a supportive environment.

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ESSAYS

Dialogic Pedagogy in the College Classroom: Overcoming Students' Negative Perceptions of the Talkaholic Teacher
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Abstract

From a dialogic pedagogical perspective, this study examined the associations between instructors' compulsive communication and student communication satisfaction and engagement. Results revealed students (N = 361) who perceived their instructors as compulsive communicators also reported lower levels of student communication satisfaction and engagement. Next, using ARCS (attention, relevance, confidence, and satisfaction) model of motivation, we tested whether content relevance mediates the negative associations between instructors' compulsive communication and student communication satisfaction and engagement. Results showed content relevance partially mediated the negative relationship between compulsive communication and student communication satisfaction, and fully mediated the negative associations between compulsive communication and engagement outcomes.

Keywords

Compulsive Communication, Content Relevance, Student Communication Satisfaction, Student Engagement

The National Survey on Student Engagement (NSSE, 2007) stressed that instructors must become involved in high impact activities that center on purposeful tasks in order to get students engaged in higher education. Similarly, Weaver and Qi (2005) stated that students become more academically successful when they are actively engaged in the learning process. Essentially, this approach demands that students frequently interact with faculty and peers through continued dialogue and meaningful communication. Yet, the traditional college classroom positions instructors to talk more frequently than their students (McBride & Wahl, 2005). Consequently, this lecture format frames the classroom as a graveyard – rows and rows of silent student bodies (Butin, 2010). In this lecture format, Bok (2006) argued that instructors dominate class time with too much talk and, in turn, silence students. Hence, the compulsively communicating instructor may undermine the interactive and learner-centered classroom and hinder student educational outcomes.

The shift from instructor-centered to student-centered approaches gave rise to an array of possibilities for fostering dynamic communication processes (Huba & Freed, 2000), engendering democratic classroom spaces (Dallimore, Hertenstein, & Platt, 2008), developing new ways of engaging students (Strange & Banning, 2001), recognizing the instructor-student relationship as interpersonal (Frymier & Houser, 2000), and, for some instructors, theorizing their method of teaching as

friendship (Rawlins, 2000). This is not to say that effective instructors no longer utilize lecture in their instruction or that unless an instructor has fully embraced one of the ideas mentioned here, they are not student-centered. Instead, as instructors continue to engage tenets of, or commit themselves to, pedagogies of student-centered instruction, the landscape and relationships of the classroom will remain in flux.

This study explored the possibility that instructors who talk too much may negatively affect student communication satisfaction and student engagement. Yet, it is also recognized that the type of instructor talk may mediate negative associations between instructors' compulsive communication and student communication satisfaction and engagement. Therefore, using the ARCS (attention, relevance, confidence, and satisfaction) model of motivation, the aim was to determine if instructor content relevance mediates the associations between instructor compulsive communication and student communication satisfaction and student engagement.

Compulsive Communication

McCroskey and Richmond (1993) identified compulsive communicators as those individuals who consistently over communicate and essentially take talkativeness too far. Existing research on compulsive communication in the classroom focuses on students talking too much (e.g., Fortney, Johnson, & Long, 2001). For example, Fortney et al. (2001) found that students' compulsive communication in the classroom hinders their fellow classmates' communication and negatively affects the classroom climate. Likewise, McPherson and Liang (2007) framed compulsive communication in the classroom as a student misbehavior that interferes with others' active learning. McPherson and Liang noted that instructors and students are aware of classroom talkaholics and reported that student reactions include eye rolling and sighing. Moreover, McCroskey and Richmond (1995) found talkaholic students still talk even when it gets them into trouble. Indeed, McPherson and Liang found talkaholic students disrupt class, distract the in-

structor and classmates, and erode learning. From the standpoint that students misbehave and talk too much in the classroom, research has shown the potential harm compulsive communication has on the classroom experience. Yet, little is known about instructors who are perceived by students as compulsively communicating in the classroom.

Although students are more likely to learn and retain information when they have the opportunity to talk in class (Weaver & Qi, 2005), instructors are positioned to talk more because of their instructional and often authoritative role. However, an instructor who talks a lot may limit the space in which students can express their voice. Thus, instructors' quantity of talk may impede upon the goals of dialogic pedagogy and negatively impact educational outcomes. Therefore, previous literature is extended by exploring student perceptions of instructor compulsive communication to determine if it negatively affects student communication satisfaction and engagement.

In general, individuals may negatively evaluate talkaholics who dominate interactions (McCroskey & Richmond, 1993). It is likely that instructor compulsive communication would be perceived similarly to students who compulsively communicate. For example, Sidelinger and Bolen (2016) found that students who reported their instructors as compulsively communicating in class also perceived them as less credible in the classroom. Recent research indicated that the current population of college students, the Millennials, desire interactive classes that include in-class discussions and group work (Roehling, Vander Kooi, Dykema, Quisenberry, & Vandlen, 2011). Millennial students are easily bored with lecture-based classes, and in turn, prefer participative-based learning (Allred & Swenson, 2006). Garko, Kough, Pignata, Kimmel, and Eison (1994) suggested that effective instruction includes an instructor's willingness to listen to her/his students. Therefore, the compulsively communicating instructor may deter student communication, negatively affect climate, elicit negative responses from students, and interfere with student learning. Given the potential for instructor com-

munication to positively affect student communication satisfaction and student engagement (Goodboy, Martin, & Bolkan, 2009), it is also possible that particular communication behaviors would negatively affect student communication satisfaction and engagement.

Student Communication Satisfaction

The instructor-student relationship is an interpersonal one that develops over time as a direct result of effective and appropriate relational communication in the classroom (Frymier & Houser, 2000). Rossiter and Pearce (1975) stated, "satisfying relationships with other people are established through communication, and our ability to communicate well is important" (p. 3). Communication satisfaction represents an ongoing interest and involvement in a communicative interaction and the perception that the interaction met expectations of the communicators (Hecht, 1978, 1984). Zakahi and Duran (1984) found a strong link between communication competence and communication satisfaction in close relationships.

Recently, the construct of communication satisfaction has been extended into the college classroom. In this context, student communication satisfaction is linked to students' affect for instructor and course (Goodboy et al., 2009), and trait and state motivation (Frymier & Shulman, 1995). Student communication satisfaction is a positive reaction to achieving communication and relational goals with an instructor (Goodboy et al., 2009). For example, research found students are more likely to experience communication satisfaction with instructors who engage in clear instruction (Johnson, 2013), treat them fairly (Holmgren & Bolkan, 2014) and appear confirming and caring (Myers, Goodboy, & Members of COMM 600, 2014). Overall, Goodboy and Myers (2007) stated that instructors must consider students' communication satisfaction in the classroom because if students become dissatisfied with the instructor-student relationship, they may be more likely to negatively evaluate the course and instructor. To date, student communication satisfaction has received limited attention and little, if any, research has focused on instructors'

ineffective communication and student communication satisfaction.

Petress (2006) stressed that learning should be an active, not a passive, process. Likewise, Kendrick and Darling (1990) stated interactive instructor-student(s) communication is crucial to the effective classroom experience. In contrast, compulsively communicating instructors may undermine students' active, participatory learning and lead to student communication dissatisfaction. Hence, the following is proposed:

H1: Students' perceptions of instructors' compulsive communication will be negatively related to self-reported student communication satisfaction.

Student Engagement

Student engagement represents a range of student behaviors that occur in and out of the classroom (Mazer, 2012, 2013a, 2013b). Student engagement centers on behaviors and activities students take part in (Rocca, 2010), which indicate learning (Pintrich & Garcia, 1991). It represents active involvement in one's own learning (McCombs & Marzano, 1990). When students are engaged in academic life, they become involved participants who effectively control their own learning experiences and environments in a variety of ways (Schunk & Zimmerman, 1998). They are likely to organize and rehearse information to be learned, have positive perceptions about their learning capabilities, and value learning in general. Overall, student engagement is a proactive, self-initiated action that requires learners to set goals, monitor themselves and their environments, and manage social interactions (Zimmerman & Risenberg, 1997). Mazer (2013a) noted that engaged students regularly display a variety of academic-related behaviors, which include participating in class, listening attentively, reading assigned chapters, reviewing course notes, and talking to peers about course content. Engaged students spend a significant amount of time taking part in the learning process, which in turn is one of the best predictors of learning (Frymier & Houser, 1999).

Student engagement is likely to happen in an actively engaged, dialogic classroom environment of student-centered approaches that encourage collaborative talk (Newman, 2017). Dialogic pedagogy promotes democratic classrooms that encourage students to take ownership of their own learning (Matusov, von Duyke, & Kayumova, 2016). Indeed, through discourse and continued interactions, engaged students add "life" to the classroom (Rocca, 2010). Students become more engaged in the learning process when instructors personalize students' learning and allow them to show their capabilities (Goldman, Goodboy, & Weber, 2017). Considering the changes in classroom and relational dynamics (Huba & Freed, 2000), the notion that instructors who talk too much may deter student engagement is explored. Student-centered approaches advocate for more democratic classrooms and fostering environments for student voices to be heard (Fassett & Warren, 2007). For example, Mazer (2017) reported that students report greater engagement in classes with instructors who offer emotional support and are willing to listen to students' needs and concerns. Likewise, Millennials prefer variety, collaboration, and interactive inquiry in the classroom (Roehling et al., 2011). According to Newman (2017), to facilitate student engagement, instructors must model the desired interactive, collaborative talk they want to promote in the classroom. In contrast, because compulsive communication is often perceived as a dominating communicator characteristic or behavior (McCroskey & Richmond, 1993), compulsively communicating instructors may interfere with students' active, participatory learning and may, in turn, erode student engagement. Therefore, the following is proposed:

H2: Students' perceptions of instructors' compulsive communication will be inversely related to self-reported student engagement.

The ARCS Model of Motivation and Content Relevance

Keller (1983) forwarded the ARCS model of motivation as a more effective way to understand and practically solve instructor issues with student motivation and influence in learning. Building from the theory of motivation and design, the ARCS model is based on expectancy-value theory (Tolman, 1932). The general premise of expectancy-value theory is that "people are motivated to engage in an activity if it is perceived to be linked to the satisfaction of personal needs (the value aspect), and if there is a positive expectancy for success (the expectancy aspect)" Keller, 1987a, pp. 2-3). Keller (1983) initially expanded value to interest (arousal of student's curiosity) and relevance (originating from student's goals), maintained expectancy (student's prediction of ability to succeed), and added outcomes (outcome influences likelihood to repeat behaviors). In articulating the ARCS model, these four components respectively became attention, relevance, confidence, and satisfaction (ARCS).

In order to motivate students to learn, they must first be paying attention. Students will have a difficult time learning if they are not paying attention. When students are paying attention, it is important for instructors to make the content relevant by connecting it to their past experiences, present life, and goals for the future. When students feel like content is relevant to their personal life, they become open to learning. Learning can be perceived as difficult, so it is important that instructors work to foster confidence that students will be successful. Finally, the interactions following success are critical in establishing that the student has had a satisfying experience.

Beyond outlining components of motivation in learning, ARCS provides teaching strategies to align with the four components. For instance, to gain attention, an instructor can "introduce a fact that seems to contradict the learner's past experience" (Keller, 1983, p. 4). Strategies for establishing content relevance include "find out what the learners' interests are and relate them to the instruction" and "state explicitly how the instruction relates to future activities of the learner" (p. 4). From the strategies Keller (1983; 1987a; 1987b) offered and additional research on content relevance (Sass, 1989), Frymier and Shulman (1995) operationalized content rele-

vance as an instructor communication behavior. Keller (2010) positioned content as a content-oriented quality of communication—opposed to a relationship oriented behavior like nonverbal immediacy, which is characterized by its impact on instructor-student relationships (Anderson, 1979). Content relevance is now defined as "a student perception of whether the course instruction/content satisfies personal needs, personal goals, and/or career goals" (Frymier & Shulman, 1995, p. 42).

Content relevance research in instructional communication remains scarce. The initial research by Frymier and Shulman (1995) supported the ARCS model in that content relevance has the potential to motivate learners within a particular course (i.e., state motivation) when the instructor exhibits the relevance communication quality. These findings were supported by subsequent research by Frymier et al. (1996). Frymier and Shulman (1995) originally revealed an unexpected link between content relevance and immediacy and failed to produce results that would indicate that content had an impact on motivation and learning. However, Muddiman and Frymier (2009) recognized the possibility of a faulty operationalization of content relevance, which had previously been constructed without student involvement. Muddiman and Frymier re-examined content relevance by asking students to identify strategies instructors use to increase relevance. Their findings suggested that content relevance is not a component or quality of communication present in effective teaching. Instead, the strategies that emerged indicated that relevance might be an outcome of effective teaching. Coupled with the observation that efforts to make content relevant may create a relational context between instructors and students (Schrodt, 2013), it is worth suggesting that motivation may be the result of content made relational. If that is the case, relevance may be as much relationship oriented as content oriented. It is in this space where the ARCS model provides an apt lens for examining communication behaviors in the classroom.

Frymier and colleagues argued that instructor efforts to make content relevant is empowering for students and found that content relevance was associated

with affective learning, effective learning behaviors, and student empowerment. Schrodt (2013) found that content relevance moderates the positive association between disclosure appropriateness of instructors and credibility (i.e., competence, trustworthiness, goodwill), noting that "content relevance and students' comfort with instructor disclosures mitigate the potentially damaging effects that disclosing inappropriate information can have on perceptions of credibility" (p. 368). Taken together, relevance is related to positive student outcomes and has the potential to alleviate negative instructor behaviors, which may include talkaholic instructors.

This presents a sort of social paradox because in general, being talkative is desired. This paradox becomes more pronounced in a classroom where, as noted, instructors are positioned to talk more than their students (McBride & Wahl, 2005). Instructors have to talk to fulfill their roles of managers of the classroom (Frymier et al., 1996), but dialogic pedagogy advocates a more open and interactive relationship between instructor and student (Chow, Fleck, Fan, Joseph, & Lyter, 2003). Shulman and Luechauer (1993) suggest involving students in designing the course interactively. Indeed, if students are active in the creation of the course, content relevance will increase when course content complements student experiences and goals (Keller, 1987b). However, it is difficult to think of a compulsive communicating instructor effectively facilitating an interactive process and fostering satisfying relationships with students.

Recall that student communication satisfaction is a relational accomplishment of achieving communication/relational goals with an instructor (Goodboy et al., 2009). Similarly, student engagement can be a relational accomplishment through rapport (Frisby & Martin, 2010). Schrodt (2013) found that efforts to make content relevant increases the latitude of personal disclosures that an instructor could make when a disclosure might otherwise be deemed inappropriate. In the creation of a relational context with students, instructors are able to make more personal disclosures that may typify an increase in student communication satisfaction. When content is relevant, students may be mo-

tivated to be engaged in the classroom and experience communication satisfaction despite an instructor who compulsively communicates. Given these arguments and previous research in which content relevance mediated relationships between disclosure and credibility (Schrodt, 2013), the following predications are offered:

> H3: Instructor content relevance will mediate the relationship between instructors' compulsive communication and student communication satisfaction with the instructor.

> H4: Instructor content relevance will mediate the relationship between instructors' compulsive communication and student engagement.

Method

Participants and Procedures

Participants were 361 (n = 222 females, n = 134 males, n = 6 no response) undergraduate students across academic ranks (n = 66 first years, n = 113 sophomores, n = 89 juniors, n = 88 seniors, n = 5 no response), enrolled in introductory communication courses at a mid-size, public university. The mean age of students was 19.82 (SD = 1.74, range = 18 to 48). Instrument administration took place during normal class time, and students received minimal course credit for their voluntary participation in this IRB approved study. Students completed the measures in reference to the class that they attended immediately prior to the research session to ensure that they reported on a variety of traditional courses (N = 43) and instructors (202 students reported on a female instructor while 154 reported on a male instructor). Information about class size (i.e., small, medium, large) followed Gorham's (1988) study in which students were asked approximately how many students were in the class: 1-25, 26-50, or more than 51. For class size, 198 students reported on a small class, 120 on a medium class, and 24 on a large class.1 Students were surveyed during the 13th week of a 15-week semester to allow them ample opportunity to develop perceptions of their instructors and classroom experiences.

Instrumentation

Compulsive communication. The Talkaholic Scale operationalized self-reported compulsive communication (McCroskey & Richmond, 1993). For this study, the Long et al.'s (2000) 14-item observer-report version was adopted, and asked participants to rate their instructors' in-class communication (e.g., "My instructor is a talkaholic," "In general, my instructor talks more than he or she should") using a scale from 1 (strongly disagree that it applies) to 5 (strongly agree that it applies). The researchers reported that the reliability coefficient for the adapted instrument was .91, and that it has strong internal reliability, content validity, and construct validity. For this study, the scale was reliable: a = .84 (M = 40.13, SD = 9.50).

Content relevance. The 12-item, Likert-type instructor content relevance measure assesses students' perceptions of how instructors can make course content relevant (Frymier & Shulman, 1995). On a 4-point scale ranging from 0 (never) to 4 (very often), students reported on explicit instructor content relevance behaviors in the classroom (e.g., "Use examples to make the content relevant to me"). Frymier and Shulman reported a reliability coefficient of .88 for the measure. For this study, the scale was reliable: a = .94 (M = 30.31, SD = 12.28).

Student communication satisfaction. Goodboy et al.'s (2009) 8-item student communication satisfaction with an instructor instrument measures students' perceptions of global communication satisfaction with a specific instructor (e.g., "My conversations with my instructor are worthwhile"). Students responded to a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The original study yielded a reliability of .98. For this study, the scale was reliable: a = .94 (M = 39.53, SD = 11.55).

Student engagement. Mazer's (2012) 13-item Student Engagement Scale measured student self-report engagement on four dimensions including silent in-class behaviors (e.g., "Listened attentively to the instructor during class"), oral in-class behaviors (e.g., "Orally (verbally) participated during class discussions"), thinking

about course content (e.g., "Thought about how the course material related to your life"), and out-of-class behaviors (e.g., "Talked about the course material with others outside of class"). Students were asked to report how frequently they took part in each of the engagement activities using a 7-point Likert scale ranging from 1 (never) to 7 (always). Mazer (2013c) reported coefficient reliabilities of .77 for silent in-class behaviors; .91 for oral in-class behaviors; .92 for thinking about course content; and .81 for out-of-class behaviors. For this study, coefficient reliabilities were .84 (M = 22.20, SD = 4.46) for silent in-class behaviors; .92 (M = 10.09, SD = 3.25) for oral in-class behaviors; .93 (M = 14.38, SD = 5.23) for thinking about course content; and .77 (M = 20.75, SD= 5.20) for out-of-class behaviors.

Results

Hypotheses one and two stated that there would be negative relationships between students' perceptions of instructors' compulsive communication and student communication satisfaction and student engagement. A series of Pearson correlations supported hypotheses one and two. For hypothesis one, compulsive communication negatively related to student communication satisfaction r = -.41, p < .0001. For hypothesis two, compulsive communication negatively related to student engagement: silent in-class behaviors (r = -.25, p < .0001), oral in-class behaviors (r = -.24, p < .0001), thinking about course content (r = -.27, p < .0001), and out-of-class behaviors (r = -.24, p < .05, see Table 1 for correlations among all variables).

Hypothesis three predicted that perceived teacher relevance would mediate the association between instructor compulsive communication and student communication satisfaction. Using the Preacher and Hayes (2008) PROCESS macro based on 5,000 bootstrap samples, the model was significant F(2, 330) = 133.44, p < .0001, R2 = .44. The confidence intervals were entirely below zero supporting the predicted mediated model (see Table 2), and results showed instructors' compulsive communication significantly affected student communication satisfaction both directly (c' = -5.81, p < .0001) and indirectly through content relevance (ab =

-.1711; 95% CI: -0.233, -0.115). Hypothesis three was supported.

Hypothesis four predicted that teacher relevance would mediate the association between instructor compulsive communication and student engagement. Using the same mediation analysis, the second predicted mediation model was also supported, F(2, 327) = 64.03, p < .0001, R² = .28. The confidence intervals were entirely below zero, supporting the predicted mediated model (see Table 2), and results showed instructors' compulsive communication significantly affected student engagement both directly (c' = 1.80, p < .05) and indirectly through content relevance (ab = -.152; 95% CI: -0.220, -0.190). Hypothesis four was supported.

Discussion

The purpose of this study was twofold. First, the associations between instructors' compulsive communication and student communication satisfaction and engagement were determined. Dialogic pedagogy and the actively engaged classroom environment of student-centered approaches served as the impetus for investigating how instructors' compulsive communication is linked with students' perceptions and outcomes in the college classroom. Informed by the body of compulsive communication research, it was reasoned that students would report lower levels of communication satisfaction and engagement in classrooms with talkaholic instructors. Second, using the framework of the ARCS model of motivation, the extent to which instructor content relevance mediated the negative associations between compulsive communication and student communication satisfaction and compulsive communication and student engagement was examined. The results indicated that instructor content relevance tempers the negative associations between instructors' compulsive communication and student communication satisfaction and engagement. These findings extend current research on compulsive communication in the classroom, and specifically extend the research on student perceptions of instructor behaviors, which generates several implications for educators and researchers.

Results are supported by earlier research related to compulsive communication in the classroom. In general, it appears students experience lower levels of communication satisfaction and engagement in classrooms with talkaholic instructors. Prior research established that compulsively communicating students garner negative evaluations from their peers and instructors (McPherson & Liang, 2007). Likewise, instructors whom students perceive to talk too much may reduce student communication satisfaction and engagement. In turn, talkaholic instructors may "teach" students to tune out and become passive, disengaged learners. In support, prior research established that students are likely to tire of listening to an instructor's voice during a long lecture (Apple, Streeter, & Krauss, 1979). Therefore, students may not only become wary of their compulsively communicating peers, but they may also become wary of compulsively communicating instructors.

Importantly, results also indicated instructor content relevance tempered the negative associations between instructors' compulsive communication and student communication satisfaction and engagement. If instructors perceive themselves as talkaholics, they may consider demonstrating content relevance to neutralize the negative consequences of compulsive communication. Based on the results of this study, content relevance partially mediated the negative association between instructors' compulsive communication and student communication satisfaction. Therefore, ensuring content covered in class is relevant to students' personal lives, academic needs, or career goals may be especially important for instructors who spend a significant amount of time in class talking. In order to emphasize content relevance, instructors need to connect content of material covered in class to students' goals, interests, and learning styles (Frymier & Shulman, 1995). Keller (1987b) suggested that instructors should relate course content to the students' future career or academic requirements. Indeed, when students perceive material in class as relevant, they may in turn "like" the material more and remain satisfied with instructor communication.

Results also indicated that content relevance fully mediated the negative associations between instructors' compulsive communication and the student engagement outcomes: silent in-class behaviors, oral in-class behaviors, thinking about course content, and out of class behaviors. Following the ARCS model of motivation, content relevance is concerned with the oft-asked student question, "What's in it for me?" (Frymier & Shulman, 1995). Indeed, instructors must establish content relevance during instruction to increase and maintain student motivation. Using the ARCS model of motivation, Keller (1983) offered a range of instructional strategies to demonstrate content relevance to students in the classroom, including: 1) relate new learning to existing skills, 2) show worth or value of the topic in the present, and 3) display future usefulness of material covered – how it may become essential later in a student's career or personal life. In support, Mc-Croskey (1992) stated, "we certainly are going to listen more attentively to a person who we believe has our best interests at heart" (p. 110). Therefore, instead of possibly tuning out a talkaholic instructor, content relevance may get students' attention and motivate students to remain engaged in the classroom as well as outside of the classroom.

It appears students may prefer instructors who do not compulsively communicate. Rocca (2010) demonstrated that student participation was part of optimal classroom management and effectiveness. Likewise, perceptions of instructor effectiveness and student learning are based on teaching methods employed in the classroom (Papo, 1999). Faculty who incorporate an interactive teaching style may encourage student involvement and enhance student affective learning (Sidelinger & Booth-Butterfield, 2010) more than compulsively communicating instructors who dominate class time. In general, students are more comfortable and learn more in classrooms with confirming instructors who respond to student questions and use an interactive teaching style (Schrodt, Turman, & Soliz, 2006). No matter their origins, this points to certain prosocial expectations that students have of their instructors' teaching styles.

As stated earlier, Johnson (2013) reported a positive link between instructor clarity and student communication satisfaction; therefore, the more efficient and direct instructors are with their words, the more satisfied students may become with communication in the classroom. Likewise, instructors should also emphasize content relevance within instruction to increase student motivation by using concrete language and examples with which the learners are familiar (Frymier & Houser, 1998). Thus, it is critical for instructors to consider their approach to students in the classroom if they want to maintain student communication satisfaction and engagement.

This study highlights that when an instructor knows he or she is talking too much, there are strategic communication decisions that can be made to overcome students' negative perceptions of compulsive communication. Although it may not be possible to curb the communication quantity of an instructor, it is possible to make course content relevant to alleviate the negative outcomes that may occur from compulsive communication. Following the outcomes of this study, instructors should communicate in ways that enhance student perceptions of content relevance.

Limitations and Future Research Directions

In light of the results of this study, limitations and future research directions are worth noting. First, students were surveyed near the end of the semester to ensure they had ample opportunity to develop perceptions about the particular course and instructor that they assessed. The time of data collection may have influenced students' perceptions of their instructor's compulsive communication. Howard and Henney (1998) stated that instructors attempt to draw students in and encourage participation at the beginning of a semester, but as the semester progresses their efforts diminish over time. Therefore, as the semester progresses, faculty may fall back on the traditional lecture format as efforts to encourage student participation earlier in the semester fails. Similarly, Sidelinger and Booth-Butterfield (2010) found students must first feel comfortable in class before

they are willing to respond to instructors' questions. Instructors' quantity of talk may increase over the course of the semester. Future research should consider students' perceptions of instructors' compulsive communication over several points in the semester to determine if instructors talk more as a semester progresses.

Second, data on class size, meeting length, or course level were not gathered. Students in larger classes report a lack of involvement, lack of individualized attention from instructors, and an inhibition of instructor-student communication (Smith, Kopfman, & Ahyun, 1996). Larger class sizes can negatively affect the classroom experience for students (Chatman, 1997). Therefore, instructors' compulsive communication may, in part, be influenced by class size. Classroom logistics such as size and meeting times should be monitored in future research. Neer and Kircher (1989) found that class participation and discussion were affected by interpersonal familiarity and acceptance. Faculty who teach in larger classes may need to employ more tactics to create a student-centered environment than those in smaller classes.

Third, the study only included content relevance as a possible mediator between compulsive communication and student outcomes. Compulsively communicating instructors who are engaging, interesting, and/ or confirming may overcome students' negative perceptions of compulsive communication. For example, funny instructors can get away with more norm violations than instructors who are not funny (Wanzer, Frymier, & Irwin, 2010). Therefore, as a continuation of this exploratory research, future research might examine the associations between instructors' compulsive communication and instructors' use of humor, self-disclosure, and confirmation behaviors in the classroom. Instructors may be able to employ a range of effective communication strategies to overcome students' negative evaluations of compulsive communication.

Finally, this study only examined two components (i.e., relevance and satisfaction) of the ARCS model of motivation as it relates to compulsive communication, student communication satisfaction, and student en-

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gagement. Future research should also examine attention and confidence to determine how, if at all, those components may influence student perceptions of talkaholic teachers and affect student outcomes. Testing all four components of the model to understand student motivation in a classroom that is not interactive, dialogic, and student centered would provide insight into ways to improve classrooms in which these issues exist.

Conclusion

Ultimately, there may be times when instructors talk too much in the classroom. An upcoming test date, especially important course material, or the approaching end to a semester may pressure instructors to dominate class time with too much talk. Instructors should be aware that their quantity of talk not only provides students with course material but also affects how students perceive them as individuals. When instructors find themselves talking too much in class, it is essential that they demonstrate the relevance of the content covered. As a practical implication, instructors who compulsively communicate need to temper students' negative perceptions by emphasizing the usefulness and importance of course content. Applying course content to students' personal needs and career goals may offer talkaholic instructors an opportunity to maintain student communication satisfaction and engagement in the college classroom. This study found content relevance to be a useful instructional technique that offsets students' negative perceptions of instructors' compulsive communication. Instructors need to consider teaching methods employed in the classroom and strive to maintain classroom environments that allow all voices to be heard and allow students to achieve positive academic outcomes.

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Table 1

Pearson Correlations between Student Outcome Variables and Predictor Variables

Variable	1	2	3	4	5	6	7
1. Student Communication Satisfaction	--						
2. Silent In-class Behaviors	.37*	--					
3. Oral In-class Behaviors	.34*	.53*	--				
4. Thinking About Course Content	.42*	.45*	.45*	--			
5. Out of Class Behaviors	.25**	.46*	.26*	.46*	--		
6. Compulsive Communication	-.41*	-.25*	-.24*	-.27*	-.24^	--	
7. Relevance	.63*	.58*	.41*	.58*	.25*	-.31*	--

*Note. *$p < .0001$, ** $p < .001$, ^ $p < .05$*

Table 2: Mediating Effects of Teacher Content Relevance

Pearson Correlations between Student Outcome Variables and Predictor Variables

Mediated Effect	B	SE	95% CI (lower, upper)
CC — Relevance — Communication Satisfaction	-.21	.04	-.28, -.13
CC — Relevance — Student Engagement	-.22	.05	-.32, -.13

*Note. *$p < .0001$, ** $p < .001$, ^ $p < .05$*

Indirect effect is significant at $p < .001$ (excluding 0)

Choose Your Own Adventure: The Quest for Student Agency in an American Literature Class

— Amy Getty

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Abstract

Student learning is frequently driven by motivations and emotions beyond the control of the instructor. However, the more choice and autonomy that students perceive they have, the more intrinsic motivation may arise and the more likely it becomes that the course will reach its goals. This article describes an attempt to add authentic student choice to a heavy-content survey course and the five-year process these changes required.

Keywords

student learning, student motivation, agency in learning

A few years ago, while serving as the faculty director of our Center for Excellence in Teaching and Learning (CETL), one of my duties was to meet with all prospective faculty candidates. The idea behind this was to showcase that teaching is central at our university and that we take faculty professional development seriously. These meetings were also great for me, personally, as I was privileged to hear many innovative teaching ideas to modify for my own use in the classroom. In one such conversation, I met a graphic design candidate who had turned his studio classes into a game. He started students out with a project where they could only use one font and one color. After they earned sufficient points and demonstrated proficiency with just these two elements, they could "buy" more fonts, colors, and features, adding to their skills and choices. I loved the game element, but was mostly intrigued by the idea of student agency and potentially changing the locus of motivation from an external grade to a sense of internal competition with students' own "personal bests."

As CETL Director, one of my other duties was to prepare a weekly teaching tip, focusing heavily on active learning strategies and research on how students learn. It struck me, after hearing this idea, that while I did not teach graphic design, I could try to modify this game to fit my own composition or literature classes. I had a fairly good design in my American Literature survey classes (broken into two parts over two semesters): active, group-based, and challenging. Frequently, however, many students who needed to take one or both of the

courses for state education certification requirements did not see their purpose. I thought that adding the element of choice and agency to these classes in particular might help students retain more about the general themes of the course as well as help them feel that the class was more than something "being done to them" or a "useless" general education or state requirement. Thus, I embarked on what I thought would be a routine course revision but turned into a five-year journey.

Pedagogical Background – Old Dog, New Tricks

Once I started down the path of attempting to empower students to accept more agency for their own learning, I examined more and more the research on motivation and the brain. In their excellent review of numerous studies of this nature, How Learning Works: Seven Research Based Principles for Smart Teaching, Ambrose, Bridges, DiPietro, Lovett, and Norman (2010) discuss strategies and techniques that help students acquire and retain materials. They use the available studies to tell us why these strategies work. While as a composition instructor I had long known that "learning is a process not a product" (Ambrose et al., 2010, p. 3), over and over I had fallen into the trap in all of my classes of feeling that the more prep I did, the more students would learn. Instead, I should have trusted that "learning is not something done to the students, but rather something that students themselves do" (Ambrose et al., 2010, p. 3). I found myself doing a lot of the heavy lifting because of a basic lack of trust in the learning process. I was inadvertently taking more and more control from the learners' hands. I had read Jackson's (2009) excellent Never Work Harder than Your Students, but I suppose its true message and philosophy had failed to sink in.

While the research on student feelings of lack of control have been around for some time (Trice, 1985), what was most intriguing to me now, after my new epiphany, was figuring out how to mitigate the emotions of helplessness by augmenting a sense of agency and motivation. In the numerical system delineated by Ambrose et al. (2010), most significant to me was their third principle: "Students' motivation determines, di-

rects, and sustains what they do to learn" (p. 5). What seems obvious to me now was lost in most of my previous course design. Over the years I had polished syllabi and modified tone, but these revisions worked mainly to close "loopholes" and reactively address course problems as they arose. Trying to motivate students by attempting to see things from their perspective was sadly lacking in this "legalistic" teacher approach to course design. What most interested me in my revisions was how to "provide flexibility and control" (Ambrose et al., 2010, p. 89), while still ensuring that students met my course goals. The authors suggest many possible strategies to achieve this goal, including the following: "Where possible, allow students to choose among options and make choices that are consistent with their goals and the activities they value. One way to give students greater flexibility is to allow them choices in portions of the course content, topics for papers, and questions for class discussion" (Ambrose et al., 2010, p. 89). In the field of composition, of course, there is a lot of leeway in essay topic choice, but I was beginning to wonder how to apply many of these ideas in a large survey course.

How, for instance, could I get through 300 years of American literature in 15 weeks while adding in student agency and choice? The question is one that reverberates across many disciplines: history, biology, psychology, and economics, just to mention a few. Of course, other disciplines have managed this conundrum, most notably in scientific fields. Armbruster, Patel, Johnson, and Weiss (2009) describe one such successful attempt, in which they modified a strict "traditional" lecture introductory biology class to incorporate "active and problem-based learning into every lecture" (p. 205). Armbruster et al. (2009) worked over two years to reorganize their course so that content held more context and student-centered learning was given priority. Their results were impressive, demonstrating "consistent increases in performance between 2006 and 2008" (p. 211). Not only did these authors recount student performance improvements, but also noted emotional success. "Finally, the course redesign had another unanticipated benefit: it improved not only the students' attitude toward the

course but also the instructor's morale and enthusiasm" (Armbruster et al. 2009, p. 212). It would seem that consciously letting go to become less of a martinet in the classroom benefits students and instructors alike.

Zull (2004) nicely augments the ideas about learning presented by Ambrose et al. (2010) and the unintended emotional benefits in Armbruster et al. (2009). Zull (2004) points out that learning, first and foremost, is change. Directly tied to successful learning are practice and emotion. Active learning strategies are almost all about practice, but as educators we sometimes discount or ignore the power of emotion on learning. As Zull (2004) states, "This emotion connection has implications for student motivation. As part of the teacher's art we must find ways to make learning intrinsically rewarding. Learning should feel good, and the student should become aware of those feelings" (p. 70). Additionally, he personally stopped trying to explain so much in his teaching, instead searching for "demonstrations, metaphors, and stories" (p. 70) to help describe new course concepts. "And when explaining seemed inescapable, I asked other students to do it, reasoning that their networks were a better match with those of their peers" (p. 70). All in all, the brain science seemed to be aligning with the germ of the game idea from my candidate meeting and my own ideas about experimenting with student agency. The stars were right for my own changes in thinking, but would I learn?

The New Course Structure

The core of my new course design for this anthology-based survey course was to throw out most of the common readings that I assigned for the whole class to read. I replaced these readings with weekly options from which the students could choose. I could not see how to make the course one where students "earned" new tools to use, so instead I shifted to earning points based on how many choices they completed. My ultimate goal was to help make visible students' own choices in attending the class (or coming to college in general), guiding them to self-direction and lifelong learning. So,

really, I had small goals that were absolutely reachable within one semester.

I started out that summer by modifying my fairly traditional discussion-based literature class. In the old version I assigned reading sheets and reading quizzes, small-group discussion which led to large-group discussion, learning activities based in small groups and in partnerships, and a full calendar of readings. I switched this model to one shared large group reading a week and a list of 7-8 readings each week that students could choose to read on their own. I felt that if they could control their own grade by controlling the quantity of choice readings they did, they would discover internal motivation and success, the intrinsic rewards that Zull (2004) asserts leads to real learning. If they just did my chosen reading for the whole group each week, they would be at the D level, if they read and responded to one of the choice readings per week, they would be at a C, two choice readings a B, and three choice readings an A. Considering that in the old model I used to assign at least four readings a week and no choices, plus reading sheets and quizzes, I felt that five readings a week (my choice and four of their own) was fair for A-level work. They would demonstrate proficiency by answering discussion questions about the readings online in our course management system.

As one might imagine, this initial course revision resulted in confusion, anger, hatred, and pandemonium, not exactly the positive motivations I envisioned. Students who were strong readers and excellent academic game players did the number of readings required and received their As. Others, confused by not having in-class deadlines for readings, waited until the end of each unit to try to finish five weeks' worth of choice readings (20 of them if they wanted an A). Some lost track of the choices they had made and were angry when their final grades were lower than they expected. Others simply gave up after earning Ds in the first unit, scraping by with Cs and (rarely) Bs in the second and third units. In short, when I gave students what I thought was nearly complete control over their own learning,

their grades instead became measurements more of time management skill than of their understanding of or internalization of course goals and objectives. I had given them control, but it was of the material, not of their own learning.

Deterred and disappointed, but too stubborn to admit defeat, I spent the next two semesters tweaking this system, adding in checklists and weekly deadlines to replace unit deadlines. I did tutorials in math and how to calculate overall points. Most of these strategies, however, were addressing the time management problems students had with the course rather than the problems they had reaching the objectives. While they were reading their choices (often made based on the number of pages rather than a desire to read the chosen materials) and answering the discussion questions I provided, they were missing out on making connections or discussing what they had read with others. I tried several online activities to try to help them connect, including online discussions, wikis, blogs, etc., but none of them could address the lack of face-to-face discussion of ideas with others. Students frequently saw their choice readings as "extra" readings or "busywork," not empowerment.

After modifying the structure as much as I could, I focused in on the course objectives and themes. I decided that choice was as large a theme in American literature as it was in students' lives, so I started to focus larger class questions around these issues. Puritans lend themselves well to discussions of free will versus fate (hint: predetermination is a big tenet), and we would complicate issues by wondering about authors and their own life choices. Would Anne Bradstreet have discovered her poetic talent if she had a non-Puritan father who did not believe in educating daughters? What are the limits of Ben Franklin's idea of a self-made man? Where does the ideal of the American Dream go when the assumptions of self-efficacy and privilege are removed? How do Frederick Douglass and Harriet Jacobs embody personal choice versus societal constraints? By making choice a part of the course theme, it helped students reexamine their own choices within the course. I also lowered the

number of readings and responses students needed to complete to get an A.

All of these changes helped alleviate the angst of my first semester in this journey, but after four years in I was still not convinced that I could see a change in the levels of student reflection and their ability to engage with course themes. While I had given students many options, I had not yet tied those options to "activities they value" (Ambrose et al., 2010, p. 89). Students could see why they had a lot of choices in the class, but I had not done as much to help them make the connections needed between their personal readings and the bigger picture within American Literature. Students still struggled with often-difficult texts on their own, without the benefit of discussion with me or their peers. Also, the sheer amount of time it took to grade all of the individual choice reading responses was breaking my will to live.

So how could I stay true to the choices and flexibility I knew to be important for student learning and motivation while drawing on the benefits of reflection as a community of learners? How could we stay within the range of good emotions that challenge students to change their thinking without triggering the bad emotions of defeat and abandonment? After yet another workshop on active learning, an idea I had been exposed to before but never applied to my classes came back to me again. This time I paid attention. I was listening to co-teachers present on how they used the technique of "Jigsaw Group Projects." This active learning technique is detailed in the article "Active Learning in the College Classroom" by Faust and Paulson (1998), and I immediately realized that it would help me crack the problem of the isolation that comes with choice. Faust and Paulson (1998) describe the technique in three stages. First, the instructor breaks the class into groups. I had already been doing a modified version of Team-Based Learning (TBL) in American Literature for years. The instructor then has one member from each of these groups become "experts" on different parts of a larger puzzle. Next, those experts meet the other experts of their section of the problem from other groups "to explore, clarify,

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and write down the main ideas of that theory. In the third stage, these focus groups disband and the original groups re-form. The home groups now include an 'expert' on each moral theory subtopic" (1998, p. 17). Within the original groups are students who have read and studied different things but who are still working on or discussing the same problem. In the fourth and final step, Faust and Paulson (1998) suggest that the group as a whole, after processing the parts, apply the overall knowledge in some way.

With only slight modifications, this technique was a perfect solution for my problem. In a Tuesday/Thursday class (75 minutes), I have students in their already assigned groups choose from a list of four or five readings (depending on the size of the groups). As homework, they bring in their own written interpretations and arguments about the merits of the reading to class. They separate into subgroups to work with the others who chose the same work. This way, they have the opportunity to talk through any questions they have individually about their choice reading and work collectively on the task of creating a strong argument about why their reading was the best one for that week. Their job is then to return to their original groups as "experts" and advocates for their readings. Each student in each group presents a different choice with a (hopefully) strong argument about why others should read it and how it connects to the class. After the group hears all the arguments, its task is to decide through consensus which reading they would like everyone to read for class the following Tuesday. Each group has one vote, and the majority rules. On Tuesday, the students read one assigned reading for everyone as well as the selected "winner" from the arguments of the previous Thursday.

Students thus are held responsible for their choices with higher social consequences than a poor individual grade on a response only I would read. They have the external motivation of less work if their reading and argument "wins," since the consequences of having a strong argument are that they only have one new reading on

Tuesday rather than two. They also get the internal motivation of "winning" by proving their choice was a good one and bragging rights if their reading is selected. They develop a sense of positive camaraderie with others who choose the same reading and get out of their regular groups once a week to become acquainted with other people in the class. While those whose readings are not chosen may have negative emotions around "losing" their arguments that week, they are minor feelings of slight disappointment that tend to motivate them to create stronger arguments the next Thursday. The pattern remains the same all semester, with the "winner" and the whole class reading due each Tuesday and the choice arguments every Thursday. Students tend to like the predictability of this pattern but do not get bored by the routine since every class contains different readings, activities, and discussions.

From the beginning of this project, I have asked students to help me modify this class through anonymous midterm and final reflections, and the general confusion over structure and time management was evident in those early reports. One student in an early version of the class stated, "There is a lot of reading and writing, my main challenge here is just being able to organize my time." Another pointed out that s/he needed "to plan ahead to get the choice readings done. It may be because they are due the following week, but I tend to forget about them." Obviously students were seeing their choice readings as a chore to complete rather than an integral part of course materials. They saw instead, as I did eventually, that other skills were more important than the literature. One bluntly wrote, "I have to work on my time management skills." A few, perhaps feeling sorry about the disconnect between my excitement for the course design and their own ambivalence/hatred of it, tried to see the positive. "I really like that we have the opportunity to do so many readings. The issue is really just finding the time to actually read them." Mentally, instead of seeing the choices as freedom, students read them as "options," and very few college students

feel they can "opt" to do anything "extra." Ironically, my initial attempts to shift control to students made them feel more helpless than ever.

In contrast, once I added in choice as a theme and modified the Jigsaw activity to fit the class, students by and large stopped writing their reflections about challenges with format and time management. Instead they started to notice course themes and write about what they would remember of American Literature: "Each author writes differently, but with a sense of purpose, and a lot of it had to do with social justice and trying to understand how they fit in the world." Those who did comment on course structure worried less about time management and instead understood the goals of adding choice to a class: "When it came to choice, it made for a much different environment. It made me feel like we had a larger part in the course and what we would be discussing. It made me more interested in the topics. […] Being given the option to choose let us pick our own paths in a way." Overall, the emotions around the class become more positive, allowing for students to feel empowerment and agency, even if they do not use that language. "I want to thank you for the environment in this class more than the content of the class (or in addition to the content). I will remember how friendly and encouraging everyone was." I feel I finally have a combination of choice, agency, and emotion that work to affect positive change and learning in my students.

Conclusions and Takeaways

The point of this saga is that course revision is difficult, and if we want to apply research on learning and motivation, it takes trial and error. While it was difficult at first to give up some of my own control over content, I feel that students are now achieving course goals with more regularity. After five years of continual change (every year if not every semester), I have the course that I initially envisioned. I firmly believe that all disciplines would benefit from adding in student agency and choice, even if at a much smaller scale than I have described here. It can be painful and time-consuming, but

it is ultimately worth the effort. Even though I have only discussed my changes in American literature here, I have incorporated many of these ideas into other courses, including first year and advanced composition classes, and interdisciplinary seminars. If I had to do this again, I would, but here is some parting advice that I wish I had had before I started:

1) Decide your purpose for the change before you start. What is the course goal you wish to strengthen or fulfill? Is your aim to change student behavior/attitude or to reinforce content knowledge?

2) Decide what (and how much) you are willing to give up. Since I never know from week to week what reading I will be teaching on Tuesday, I have to create activities and connections in a short amount of turnaround time. I also made the choice to prune a heavy survey course reading list down to the bare essentials and trust that students would still learn the same themes with fewer examples.

3) Start small. I threw out an entire (working) course structure to commit to the idea of student choice and then took five years to get it right. I don't necessarily feel that those years of experimentation were wasted; I do think I imposed unnecessary trauma and confusion on the early students.

4) Know that agency is difficult for students to embrace at first. If you are teaching students early in their college careers, especially, they often resist the ideas of choice, control, and flexibility. After so many years of being told exactly what to do to get a good grade, they may be loath to take responsibility for their own learning choices immediately. We have to encourage them into a state of independence.

5) Don't be afraid to ask students for feedback as you go. Be specific about the questions you ask about the course design and try to hear what they are actually saying even if you don't want to.

6) Don't give up. Even if things don't work out the way that you imagined, chances are that your main idea is a good one if you have based it on the evidence of how students learn. While I don't think that five years is "normal" for a class to finally come together after revisions, it does take more than one semester for any new idea, structure, or curriculum to work out its kinks. Be persistent!

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Exploring the benefits of two-stage collaborative exams

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Abstract

Traditional examinations have been shown to result in higher text anxiety, to promote memorization, to poorly reflect the realities of the workplace, and not to align with teaching styles that promote collaboration. Two-stage collaborative exams are a variation on traditional testing, in which, upon completing an independent exam, students write the same exam, or a similar exam, in a small group; their final mark is a combination of the marks they earned on these two assessments. This study examined the effects of collaborative testing on students' perceived anxiety and students' course content retention one week after the exam. Limited statistical conclusions can be drawn due to sample size, but qualitative data support the hypothesis that collaborative exams caused students significantly less anxiety than traditional exams. Given the benefits of two-stage collaborative exams, there is a very compelling case for adopting this alternative examination format as a form of assessment in the college classroom.

Keywords

collaborative exams, two-stage testing, assessment, anxiety

Many courses use tests and exams to assess what students have learned. These tests and exams often make up a large portion of students' final grades and students typically write these assessments independently. Unfortunately, these traditional exams serve primarily to evaluate what students know at a given moment in time and do not help students to learn (Epstein, Epstein, & Brovsic, 2001; Epstein, Lazarus, Calvano, Matthews, Hendel, Epstein, & Brovsic, 2002). There are a number of additional drawbacks to these traditional exams: students don't receive feedback on their exams for days (or sometimes weeks) while the teacher is grading them; teaching styles and assessment styles often do not align for teachers who employ collaborative teaching approaches in the classroom; traditional exams do not replicate the reality of the workplace (Gilley & Clarkston, 2014).

An alternative to the traditional independently written exam is a two-stage collaborative exam. It is a variation on traditional testing, in that upon students' completion of an independent exam, they write the same, or similar exam in a small group (Gilley & Clarkston, 2014). Two-stage collaborative examinations have been found to eliminate or diminish some of the drawbacks of the traditional examination process and benefit student learning. For example, studies have found that two-stage collaborative testing can reduce class drop-out rates and create more positive student perceptions of

courses (Stearns, 1996). This approach also allows students to receive immediate feedback on their exam by allowing them to discuss each question with their peers during the collaborative exam. Additionally, collaborative exams provide a more authentic assessment, better simulating the conditions students will face in the workplace; while employees are expected to have knowledge and be able to complete tasks independently, teamwork and collaboration are also required in most professions and these skills are included in learning outcomes for many programs.

Another benefit of two-stage collaborative exams is that students can learn during the exam. Studies which have examined collaborative testing have found that students retain more information following the exam when there is a collaborative component (Cortright, Collins, Rodenbaugh & DiCarlo 2003; Gilley and Clarkston, 2014). For example, Gilley and Clarkston (2014) found that students at all levels of achievement can learn from each other while being assessed. Their test results showed that students who participated in two-stage collaborative tests retained more information two days after testing than students who did not participate in the collaborative testing. Similarly, Cortright et al. (2003) found that two-stage collaborative testing enhanced student learning and increased student retention of course content. Students who participated in the collaborative testing were found to retain more of the course material four weeks later. However, some studies have failed to replicate this empirically (e.g., Leight, Saunders, Calkins, & Withers, 2012), which could be attributed to a number of factors including the number of students in a group, or low effect sizes.

Similarly, mixed results have been found related to the impact of the two-stage collaborative test on student anxiety. Although many studies have concluded that collaborative testing lowers test anxiety (Caldecott & Emmioglu, 2015, Ley, Hodges, & Young 1995; Muir & Tracy, 1999; Russo & Warren, 1999), others found no significant difference in test anxiety between students who collaborated on their exam and students who worked alone (e.g., Breedlove, Burkett & Winfield, 2004). However, many report at least anecdotal

evidence that students felt less anxious (for greater discussion, see LoGiudice, Pachai & Kim, 2015).

One final benefit to this type of collaborative testing is that it is an enjoyable experience for both students and instructors alike (Rieger & Heiner, 2014). For example, whether backed up by performance data or not, students perceive that collaborative tests help them to better learn the material. For instructors, it is often an opportunity to see students engaged with the course material and demonstrate their learning and critical thinking skills (Rieger & Heiner, 2014); it also virtually eliminates the need to go over the test in a subsequent class (Bloom, 2009).

Purpose of the Study

This study explored the benefits of collaborative testing in a college environment by comparing collaborative testing with traditional testing in two psychology classrooms. Based on the many benefits of two-stage collaborative testing cited in the literature, it was hypothesized that two-stage collaborative exams may hold benefits for students, specifically in terms of content retention and anxiety.

Methods

This study was designed to determine if collaboration during a two-stage test increased students' content retention and decreased students' anxiety, and draws on student test scores and an anxiety questionnaire to answer these questions.

Participants

The current study examines the test scores of college students from two psychology classes who agreed to participate in this study (N = 18). Demographic data were not collected as they did not pertain to our research questions and also to protect students' privacy.

Materials and Procedure

The experimental design of the current study is an adapted replication of the design developed and used by Gilley and Clarkson (2014) to study undergraduates' learning during collaborative testing (Figure 1).
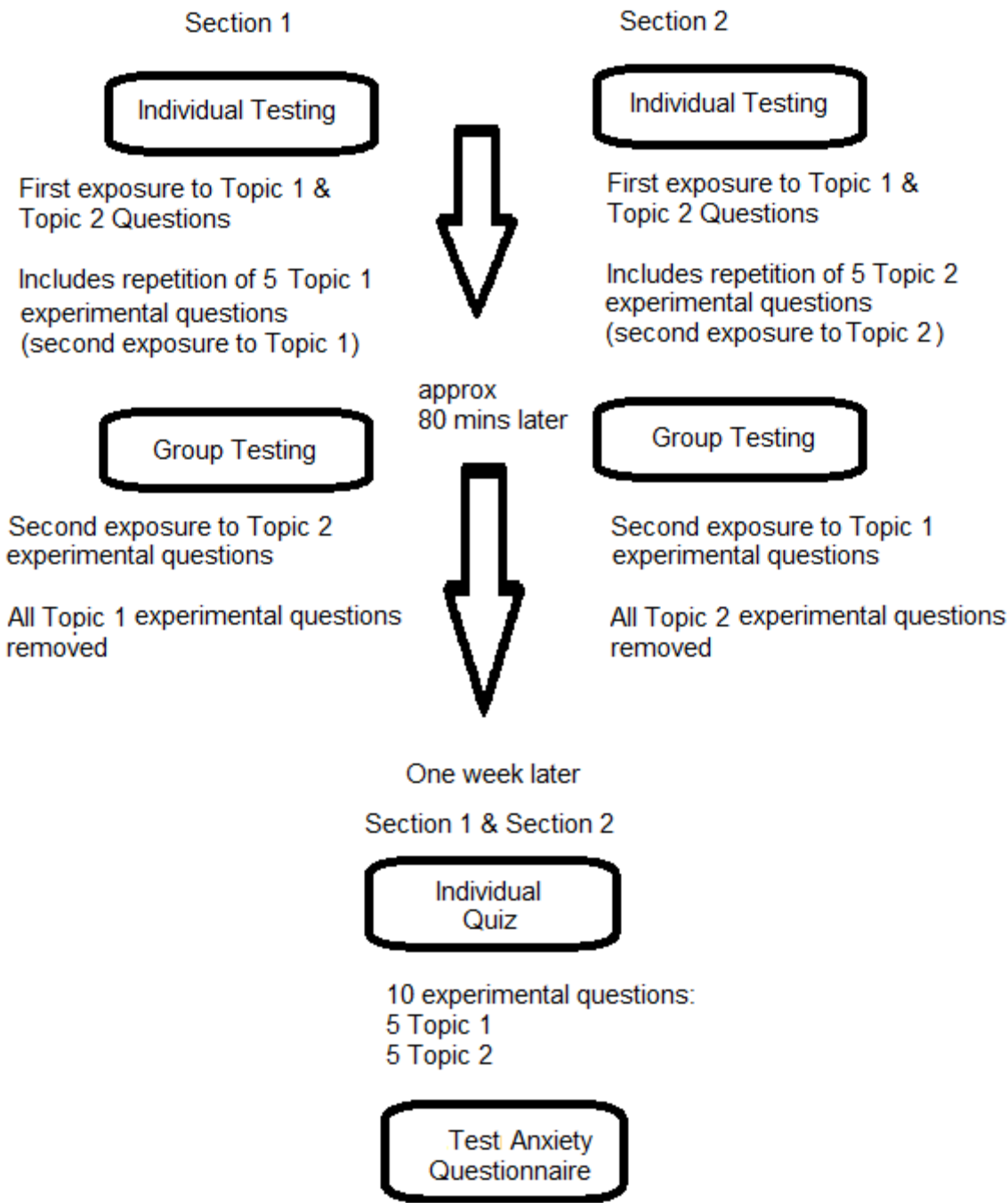

Figure 1: The experimental design used to collect data on the effect of the two-stage collaborative tests on student content retention and test anxiety.

During the two-stage test, students first wrote a 55-question test and then were grouped to complete a 45-question test on the same topic. However, simply being exposed to a question more than once results in better retention independently of our collaboration manipulation (known as testing effects; Butler and Roediger, 2007; Roediger and Kapricke, 2006). That is, because the act of testing itself (i.e., retrieving information from memory) improves performance, we needed to ensure that students were not exposed to certain topics more frequently than others during any of the testing or retesting. To address this possible confound, we had to make sure that students were seeing each of the 10 critical experimental questions the same number of times across the individual and group testing phases of the study. To accomplish this, all students were exposed to all 10 of the experimental questions (5 from each topic) during the initial individual test, and 5 of these questions were repeated verbatim at the end of the test to provide a second presentation. In Section 1, it was the 5 questions from Topic 1 (classical conditioning) that were repeated; in Section 2, it was the 5 questions from Topic 2 (operant conditioning) that were repeated. In this way, we mirrored Gilley and Clarkston (2014) and ensured that students were exposed to the questions from one of the two topics twice during the individual testing. During the group testing phase, both instances of the duplicated experimental questions from the topic they saw during the individual testing were removed (but the questions pertaining to the other topic were retained), resulting in a test containing 45 questions. This ensured that, for these 10 experimental questions, each student saw them twice (see Figure 1). This method is consistent with the experimental design used by Gilley and Clarkson (2014) and addresses the issue of testing effects mentioned previously.

Once the class had completed the independent test, students were grouped into teams of 4 or 5 to complete the collaborative test and come to a consensus on the answer to each of the 45 questions. Except for the repeated critical experimental questions, the other questions on

the test were identical to those they answered on the independent test. The class period used for this method of testing was 3 hours. Students typically completed the individual test in 30-45 minutes; the collaborative testing took slightly longer because of group discussion, but both were easily completed during the class period.

One week after these tests, students completed an independent multiple choice quiz to assess retention. It contained the 10 experimental questions verbatim from the collaborative test (5 on the topic of classical conditioning and 5 on operant conditioning). Students were not told in advance that there would be a quiz and the quiz was completed at the beginning of class so that none of the test questions were taken up or discussed before the quiz was completed.

Students then completed the Test Anxiety Questionnaire (Nist & Diehl, 1990), which consists of 10 questions answered using a Likert scale. Two copies of the questionnaire were distributed to students, who self-reported their perceived anxiety during the traditional independent test on one copy and the collaborative test on the other copy. This questionnaire was developed as a tool to reflect on past testing experiences, so the questionnaire was given to both classes following the learning quiz in the second week of data collection. Students were then given the opportunity to respond to three open questions created by the researcher, which further explored their opinion of two-stage collaborative tests, and how it affected their level of anxiety. The questions were: (1) What did you like or dislike about the two-part group test?; (2) Would you like more tests to be designed this way?; and (3) Do you think the two-part group test caused you more or less anxiety? Why?

It should also be noted that, in order to minimize confounds related to the 'newness' of the collaborative testing experience for students, the data were collected during the second collaborative test of the semester (the first one occurred a few weeks earlier in the semester and allowed students to become familiar with the procedure).

Results and Discussion

Due to the low participation rate in this study, it was not possible to conduct meaningful statistical analyses. Only 13 students in the first class and 5 students in the second class agreed to participate in the study, completing the test, quiz, and anxiety measure. Although all enrolled students who were present the day of the test participated in the collaborative test, very few students attended class on the day of the subsequent quiz (when consent for participating in the study was obtained), possibly due to the fact that it was the class session following a large test, paired with the fact that it was St. Patrick's Day. As such, we had a very small sample size. Because of this, the analyses that follow are limited and conclusive inferences cannot be drawn from these data about the benefits that collaborative testing can have on students' content retention. Results should be interpreted with caution.

Learning and Retention

On the initial individual test, students in Section 1 had an average score of 58.4% (SD = 25.1, n = 13) on the Topic 1 experimental questions while students in Section 2 had an average score of 80.0% (SD = 0, n = 4) on the Topic 2 experimental questions. These average test scores represented a baseline measure of knowledge, prior to any manipulation of collaboration. However, since the scores are significantly different (p < .05), these scores can no longer be used as a baseline as the difficulty of the questions will confound the effects of our collaboration manipulation in the two-stage collaborative test. The overall mean scores on the individual test for the two sections were also significantly different, (p < 0.05), further confirming a significant difference between the difficulty of Topic 1 and Topic 2 questions. This problem was also encountered in Gilley and Clarkson's (2014) analysis, but since they had a much higher participation rate and an approximately equal number of students in the control and experimental groups, they were able to continue with their analysis as planned.

Percentage learning gain was calculated for each individual student to provide an understanding of the effects two-stage collaborative tests can have on student learning. For each student, the difference between their individual test score and learning quiz scores was calculated for each topic. For example, for Topic 1 questions, [%correct learning quiz - %correct individual test] evaluated the learning that occurred on that topic as a result of the collaborative testing. The same score was calculated for each student on the Topic 2 scores. Fifty eight percent of students were found to have learned more due to participating in a two-part collaborative exam, while 24% were found to learn more due to participating in the independent exam. There were also a few students who exhibited equal learning gains (18%) on both the two-part collaborative exam and the traditional independent exam. Although these results suggest that two-stage collaborative exams increase students' content retention and therefore learning, the difference in the difficulty of Topic 1 and Topic 2 questions may have increased or decreased students' potential learning gain, affecting the results. More studies with larger sample sizes would be able to draw more conclusive results.

Other factors should also be considered when interpreting the results of studies that explore the benefits of two-stage collaborative exams. The findings of this study were based on students' second experience writing two-stage collaborative exams. Additionally, in this study many students knew their test partners prior to the exam. Breedlove, Burkett & Winfield's (2014) study found no significant difference in test anxiety between students who collaborated on their exam and students who worked alone, but students in their study had not engaged in prior collaborative learning or worked with their test partners prior to the test. Studies that explore student anxiety, 1) after multiple two-stage collaborative tests, 2) following a variety of different exam formats, or 3) subsequent to collaborative learning experiences in the classroom, may lead to different conclusions. More studies are needed to explore the effects these variables have on the relationship between student anxiety and two-stage collaborative tests.

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Exploring the benefits *continued*

Anxiety

For each student, two anxiety scores were calculated by summing the Likert scores on Test Anxiety Questionnaire: one score for students' perceived test anxiety on the traditional individual test; and one for students' perceived test anxiety on the two-stage collaborative test. Results suggest that students believe two-stage collaborative exams caused them less anxiety than traditional independent exams. In addition, fewer students reported experiencing unhealthy levels of test anxiety during two-stage collaborative tests than when they completed the traditional independent tests. For each of these scores, the sum of the responses could range from 10 to 50. Nist and Diehl (1990) suggest the following interpretation: 10-19- no test anxiety; 20-35- some (healthy) test anxiety; over 35- unhealthy level of test anxiety. Anxiety scores for the traditional individual test (M = 30.1, SD = 6.5) were significantly higher than anxiety score for the collaborative test (M = 20.6, SD = 6.2; p < 0.05).

This suggests that students felt two-stage collaborative tests caused them significantly less anxiety than traditional independent tests. This was also reflected by the open-ended responses of the questionnaires where 89% of students indicated that the two-stage collaborative test caused them less anxiety then a traditional independent test. They specified that the collaborative test caused them less anxiety because they felt like they were "not alone" and believed that it would improve their grade. In future studies, it would be interesting to explore the relationship between student personality characteristics (e.g., extroversion) and their opinions of two-stage collaborative exams.

Despite the fact that two students believed the collaborative exam format did not decrease their anxiety level, all respondents said they would like more tests to be designed as a two-stage collaborative test in the future. Students "…liked being able to work as a team and talk about answers…" They suggested that the process helped them "better understand the answers." They also liked the two-stage collaborative test because it helped them more accurately predict their mark. Although most (89%) students liked the two-stage collaborative test because it reinforced their confidence in their answers, one student felt the group work negatively impacted his/her confidence, making him/her "doubt answers that were correct." Despite this, students felt, overall, that the two-stage collaborative test caused them less anxiety and all 18 students expressed the desire to have more tests follow this testing format.

A word of caution about self-reported measures since students self-reported their test anxiety in this study. Self-reports can be affected by response set, a tendency to answer most questions the same way (McMillan & Schumacher, 2010). Responses can also be affected by social desirability, meaning that students' responses may have been biased by how they thought their peers, instructors, and/or the researcher would want them to respond (McMillan & Schumacher, 2010). In addition to the problems associated with response set and social desirability, the anxiety questionnaire in this study required students to report their anxiety for both traditional and collaborative exams at the same time, which may have minimized differences between the two. It is also important to note that the Test Anxiety Questionnaire measures perceived anxiety not actual anxiety, so future studies could administer anxiety measures following each stage (individual and collaborative) to further explore the effect of two-stage collaborative testing on anxiety.

Conclusions and Implications

Although the present study was performed in a psychology class, collaborative testing can easily be adapted to a number of content areas. Benefits to using collaborative testing have been reported in many other disciplines including physics (Reiger & Heiner, 2014), exercise physiology (Cortright et al. 2013), nursing (Rivaz, Momennasab, & Shokrollahi, 2015), natural disasters (Gilley & Clarkston, 2014), language (Caldecott & Emmioglu, 2015; Russo & Warren, 1999), sociology (Breedlove, Burkett, & Winfield, 2004), geology (Knierim, Turner, & Davis, 2015), biology (Leight et al., 2012), pharma-cy (Tejada, Fasanella, & Elfadaly, 2016), and research methods and statistics (Stearns, 1996). Although not all of these studies found quantitative differences in scores due to collaborative testing, they all reported that students enjoyed the collaborative testing experience, which is in line with the results of the present study. Despite all the benefits that have been identified by most of these researchers, two-stage collaborative tests are still not widely used. This lack of use is unfortunate because two-stage collaborative examinations have the potential to change the way we assess student learning.

The present study suggests that, using this technique, instructors may be able to simultaneously decrease students' anxiety and help students learn or retain course material. The topics we chose for our critical questions (classical and operant conditioning) are frequently identified by students as the most difficult topics in psychology (Gurung & Landrum, 2013; Whisenhunt & Hudson, 2017), so perhaps topics of more moderate difficulty should be used in the future. In spite of this, students expressed many positive opinions about two-stage collaborative tests: they enjoyed learning from their peers, discussing questions, and comparing answers, and they reported feeling less anxious. Although students did identify a few negative aspects of two-stage collaborative exams, they unanimously agreed that they would like more exams to be designed as two-stage collaborative exams. The findings of this study and past research (e.g., Cortright et al., 2003; Gilley & Clarkston, 2014; Ley et al., 1995; Muir & Tracy, 1999; Russo & Warren, 1999; Stearns, 1996) suggest that instructors should at least consider adopting the two-stage collaborative exams as a form of assessment in their courses.

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Teaching with AudaCity: Active-Learning with an Urban
— Colby King and Matthew Cazessus

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Abstract

This paper reports the development and implementation of a board game and active-learning module that allows participants to compete with one another in strategic planning and coalition formation called "AudaCity." This paper provides an overview of the game's mechanics and places the game within the larger context of games-based learning and serious games. Utilizing a games-based learning design, the game puts players in the roles of adversarial property developers, political actors, and zoning committees all seeking to build and raise rent from developments within a spatially constrained urban grid. The paper draws on evidence from several undergraduate courses in which AudaCity was used to demonstrate that after playing AudaCity students were able to apply urban studies concepts and theories to their games and generalize to relevant situations in real-world cities. The authors also suggest ways in which the AudaCity module could facilitate learning in educational environments beyond the urban studies classroom.

Keywords

games-based learning, growth machine theory, real estate, serious games, sociospatial perspective, urban sociology, urban studies

AudaCity is an interactive, competitive board game where students play as real estate developers seeking to build and raise rent from developments within a spatially constrained urban grid. Contributing to the broader discussion of the value of active-learning exercises, this paper illustrates how this game improves both student engagement and learning. The peer-competitive aspect of the game heightens students' interest in interacting with a system that simulates real-life urban growth dynamics and inspires deeper understanding of urban studies models. While AudaCity was developed to improve student understanding of urban sociological theory, the game could be adapted for any classroom in which issues related to social inequality, economic development, social policy, and group processes including history, political science, economics, public administration, or marketing, among others, are being taught. In this paper we will delineate the game mechanisms and demonstrate student learning using evidence collected from several instantiations of the game in a variety of classrooms.

Background

The active-learning paradigm encourages instructors to create experiences that require students to contribute to the instructional environment and enhance student

understanding of course material (Dotolo, 2010; Mc-Cammon, 1999; Wills, Brewster, & Fulkerson, 2005). Unlike traditional lecture, the active-learning approach creates "learning opportunities for our students that allow them the opportunity to *experience course material, rather than just think about it*" (Wills, et al., 2005, p. 394, emphasis added). A review of today's post-secondary pedagogy demonstrates the effectiveness of active-learning exercises which range from in-class games to explorations of social life outside of the classroom (Grauerholz & Settembrino, 2016; Manohar et al, 2012-2013; McCammon, 1999; Petranek, 1994; Scarboro, 2004; Smith, D., 1996; Smith, S., 2016; Wrye, 2012). Simulation activities are understood to improve student engagement and learning because they can provide direct (if modeled) experience with the concepts, theories, or social issues (Browne & Roll, 2016).

Games-based learning, an example of active-learning, employs techniques where students either play interactive games or role-play a simulation to achieve goals within a prescribed set of conditions of varying complexity. Examples of simple applications include using the framework of well-known "quiz show" styled games that bolster engagement by encouraging a competitive spirit among students during a single class session (Jessup, 2001; Pence, 2009; Schella & Rojewskia, 1995). More complex iterations of games-based learning fall under the "serious games" label. Serious games are those games that are designed to teach the players new information rather than simply being a source of entertainment (Baptista & Vaz de Carvalho, 2013). The purposes of serious games in educational settings include a wide range of applications, from developing empathy through role-playing experiences to improving students' mastery of complex models (Djaouti, Alvarez, & Jessel 2011).

In a sociological setting, various modifications of the board game "Monopoly" have been prescribed as a mechanism for teaching about social stratification (Coghlan & Huggins, 2004; Ender, 2004; Fisher, 2008; Jessup, 2001; Smith, 2016; Paino & Chin, 2011, Waldner & Kinney, 2004). Even more advanced in complex-

ity, Simpson and Elias (2011) developed a community simulation where students role-play as characters that interact with one another and a collective budget sustained across many class sessions (Simpson & Elias, 2011).

Whether a simple in-class challenge or a more serious simulation, all games-based learning techniques break from the traditional lecture structure by providing students with the agency to exert some control over the learning framework. This higher-order engagement has been repeatedly identified as a means of overcoming students' reluctance to engage with intimidating academic concepts and encouraging the adoption of new perspectives (Bramesfeld & Good, 2015; Coghlan & Huggins, 2004; Pedersen, 2010). As students evaluate, strategize, and compare their choices, they develop a robust experience with academic theories and concepts - turning the abstract into something "real" that they can reflect upon. The most successful games-based learning applications pair critical decision-making with immediate feedback and the opportunity to identify links between their experiences and course concepts (Bramesfeld & Good, 2015; Norris, 2013; Steele, 2003).

During the 1950s and 1960s, urban theory classrooms were trailblazing in-class simulations designed to explore social problems like overcrowding, environmental hazards, and spatial inequality (Nikkel, 1976). The best compilation of urban simulations from this period is an edited volume by Coppard & Goodman (1979) in which they collected and summarized dozens of urban simulations developed by a variety of individuals – from educators to policy makers. Coppard and Goodman's collection raised two important critiques of urban simulation. First, most required a significant sacrifice of time; some ranged in duration from over a week to an entire semester. Next, many of the games also involved significant management by a supervisory instructor, which can impede the flow of gameplay and reduce students' sense of control over outcomes. Over the next few decades, the use of games and simulations to introduce students to urban dynamics waned dramatically (Dorn, 1989).

Today's incarnation of "urban-themed games" have limited use within an urban studies classroom. While the most popular board game of all time "Monopoly" (Magie & Darrow, 1903) is superficially a "real estate game," its utility in teaching urban theory is undercut by its static geography and the reliance on the luck of the dice roll, irrespective of any meaningful diplomacy. In contrast, settlement games like the highly praised "Settlers of Catan" series (Teuber, 1995) encourage players to construct their empires by negotiating over limited space and resources. Unfortunately, most strategic settlement games are designed around historic (often ancient or pre-industrial) themes and require an investment of several hours of time to complete - a luxury rarely viable in an undergraduate setting (Veracini, 2013).

In digital simulation, the most visible example of urban dynamics is the popular "SimCity" series (Maxis, 1989). "SimCity" is an electronic game which allows individual players to manage the growth of a city, allocating budgets on infrastructure, planning transportation, and implementing zoning. While effectively introducing some key features of urban planning, Gaber (2007) identifies how SimCity contains several limitations as a pedagogical tool. Foremost among these is that real cities are not constructed based on the whims of a single omniscient dictator. To be a useful tool for modeling urban growth mechanisms, a game must engage multiple actors seeking both shared and competing interests.

AudaCity: Teaching Urban Dynamics through Active-Learning

AudaCity is an active-learning game in which four to six students role-play as real estate developers and political actors in a simulated urban space. The game requires face-to-face negotiation and hands-on play which facilitates multiple methods of learning. As players pursue their individual interests, a unique city-space is developed that closely mirrors many of the features seen in contemporary cities. Gameplay takes place in four phases over six, eight, or ten rounds. The phases will be described in brief detail below (a full set of instructions is available from the authors upon request) and a game of six rounds may be completed in about 90 minutes.

AudaCity as the Board Game

In "AudaCity," each player's goal is to accumulate more wealth than the other players by collecting rent from "developments" that they place on the game board. In reality "developments" may be any physical structure that is built into the urban environment for a specific purpose - such as industrial, commercial, or residential buildings. Similarly in AudaCity developments are represented by tiles that vary by size, rent value, and initial financial investment. Importantly, players may not simply set their developments on the game board as they wish. Before any development piece can be set down and generate rent, all players must complete the following steps in turn: (A) strategically select an unclaimed space on the game board that can contain one of their development tiles, (B) make a proposal by paying the cost to tentatively claim that place for their development tile, (C) negotiate with peers to secure political support for their development tile, and only then may (D) players with "surviving" proposals pay the final "construction cost" to install their development to the game board as a permanent rent-generating development. For brevity, we will limit our explanation of the gameplay to the two
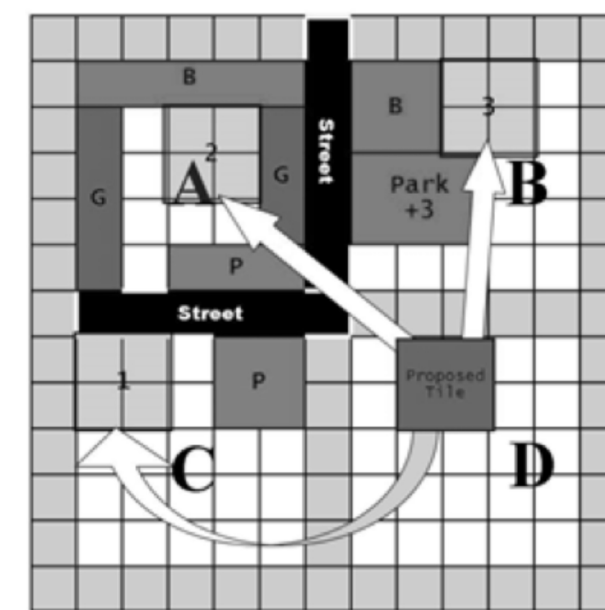

Figure 1: Examples of development placement strategy to three "blocks"

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Teaching with AudaCity *continued*

active-learning steps: proposal placement and negotiated political support.

The AudaCity game board is a grid of uniform "blocks" separated by columns and rows that operate as placeholders for city streets. At the start of the game, a few long tiles representing streets are placed between blocks to indicate which city blocks are connected to a transportation system and thus "active" for play. As game play advances more streets are added, opening up new blocks for development.

Much like real urban space, not all locations are equal in value or desirability. On the AudaCity game board, developments' rental income is modified by the spatial conditions of their placement: block density (sharing a block with other developments), nearby government infrastructure (such as parks or prisons), and street frontage (space adjacent to street tiles). Figure 1 illustrates an example where three strategic placement options are available to the "green player" (indicated by the letter "G") during the course of a game, seeking the best possible placement for a 2" x 2" development tile within three active city blocks: A, B, and C.

In option 1, the green player's potential development would be placed in Block C and receive a rental income bonus from two squares of street frontage and a single neighbor. In option 2, the green player would forgo the street frontage to secure the rent bonus generated by sharing a block with four neighboring structures, two of which are their own. In option 3, a future-minded green player could benefit from the rent bonus generated by sharing a block with a city park and might see their development's value increase later if a street or other structures are added to that block. The impact of these spatial modifiers is twofold. First, the game-space better reflects actual urban space where a development's value is determined by its proximity to amenities, accessibility, and density. Second, the "city" built through play is organically created through the accumulation of individual players' decisions instead of a static board or pre-planned script - thus a dynamic play space in which no two games are the same.

AudaCity as a Role-Playing Simulation

While players are acting as developers seeking to maximize their rent, players also role-play as local political forces that possess the influence to determine which proposals will survive a vetting each turn. To select the roles for the game, inspiration was drawn from Logan and Molotch's (1987) seminal work modeling urban growth, as well as Gottdiener, Hutchison, and Ryan's (2014) sociospatial perspective (SSP). The growth machine model argues that an elite group of local actors unite in support of various growth projects, with participants forming unique coalitions based on shared individual interests in each potential growth project (Logan & Molotch, 1987). Coalition members often include real estate developers, as well as politicians and other actors such as local media and higher education institutions. The SSP examines developed "as the linked outcome of economic, political, and cultural factors" (Gottdiener, et al., 2014, p. 92). In contrast to the growth machine model, the SSP examines real estate developers and local government officials as the most influential actors among the elite, while also assessing the means by which symbolic meanings are attached to urban spaces and contribute to processes of urban change (Kleniewski, 2002). The following roles were created for six local growth coalition actor positions: the mayor's office, the city newspaper, the local chamber of commerce, the labor union, the city university, and the utility company. These roles determine how much political power each player controls and determine the order in which players place proposals and vote.

Players select their roles every other round through a blind, simultaneous bidding process where they commit some amount of their money to "run for office." The player who bids the most money wins the right to choose their role (and thus turn order and political power) first, followed by the second-highest bidder, and so on. Regardless of the outcome, all money bid for role selection order is lost, so players must decide for themselves what value they place on selecting roles. Once the players have chosen their roles and placed their proposals in the assigned order, the negotiation phase takes

place. During negotiation, players consider the relative advantage and disadvantages of the proposals that have been placed on the board and choose to distribute their "support tokens" (a representation of political influence) onto the proposals they most favor.

Two key rules shape gameplay and strategy in this phase. First, the proposal with the fewest "support tokens" at the end of the negotiation phase is removed from the board, unbuilt and the money spent to propose the development is thus wasted. Second, players may not vote for their own proposal. As a result, players must convince their competitors to support their proposals or they will lose their proposal investment and the opportunity to add a rent-generating development to the game board. The potential for exclusion often leads to players framing debates in terms of how their proposed developments would actually benefit their peers. In many trials of AudaCity, groups of players will coalesce around shared interests and form coalitions to ensure the success of their development goals (or the failure of perceived threats) through bartering for money, support tokens, and political favors.

The AudaCity game continues through these phases of role-selection, development placement, and negotiation through the predetermined number of rounds. Players allocate their budget according to their own strategy: bidding on growth coalition roles, placing developments, and even directly buying influence through their peers each round. At the end of each round, players collect modified rents from all of their developments. At the very end of the game, players collect rent, sum the construction costs of their built developments, and add that value to their remaining cash on hand. The player (or team) with the greatest wealth is the winner of the game.

An additional layer of collaboration may be added to the game by having teams of three or four students play as the individual actors on the board. This way of playing was attempted in one playtest, and has the advantages of reinforcing student knowledge as they discuss with their teammates the strategies and choices

available to them and allowing several more students to play on one board. This style of playing, though, does dramatically slow the pace of the game, and has the potential to leave some players feeling left out when their team does not agree with their individual strategy preferences.

Evaluation

Novelty and engagement aside, it is critical to evaluate the effectiveness of serious games as a teaching instrument. Baptista and Vaz de Carvalho (2013) instruct developers of serious games that the first question to ask is "does the student learn with this product what he/she is supposed to?" (p. 4). After all, if a serious game does not support students' learning, then the activity is little more than thematic entertainment. For this evaluation, the AudaCity module was implemented along with post-play writing assignments as a required activity in four mid-level urban sociology courses at three different institutions. Two of these courses were at a large public state university (35 students, and 47 students), one was at a small private liberal arts college (19 students), and one was at a regional state university (40 students). In each application, students split into small groups of four to six players and each group received a copy of the board game and materials for simultaneous play. The instructor then reviewed the rules of the module and allowed the students to play the game independently in their groups, while remaining present for rule clarification issues. After the conclusions of gameplay, the instructors conducted debrief sessions in class. Debriefing after similar active learning exercises has been demonstrated to be an important part of the learning process (Coghlan & Huggins, 2004). Debriefing after simulation games has been demonstrated to contribute to students' critical thinking skills as it fosters deeper insights (Richards & Camuso, 2015). In our debrief sessions, students volunteered their reflections on their experiences in the game and how the game related to course material.

Post-play writing assignments were also implemented based on a similar assignment developed by Fisher (2008), which has students write about the events and

emotions of their experiences in the activity, and also has them write about the game mechanisms and evaluate the process of the game through course concepts. These post-play writing assignments also facilitate students' opportunity to reflect on the events of their game while also providing opportunities for communication and feedback between the student and instructor.

From the student writing in these post-play assignments four themes emerged which illuminate how this module facilitates both learning and writing after the activity. The first theme emerging from these assignments was that students demonstrated an ability to reflect on their own engagement in the module, including their own emotional investment in their gameplay experiences. The second theme was that students were able to describe processes of coalition building and complex group dynamics. Each of these themes provide evidence that active-learning modules are effective and that the AudaCity module may be applicable in other courses. An additional theme was that students were able to use their experiences in the game to describe urban dynamics relevant to course material. Finally, students were also able to generalize from the module to their own observations of the real world. Each of these themes are described in more detail below using selective quotations from students' post-play responses.

Engagement and Emotional Investment

A theme of engagement, often including expressions of emotional involvement in the activity, emerged from students' writing about their experience of the AudaCity module. Even a well-designed simulation can fail to meet the educational needs of the classroom if students are not able to immerse themselves in the roleplaying aspect of the game. Just as lab-based social science relies on experimental realism for validity, a simulation in which students are merely going through the motions as required by the instructor cannot successfully model the human element of negotiation and alliance formation. When students are emotionally invested in the activity they will think more deeply about the processes of the game and related course concepts. This is important, be-

cause as Baptista and Vaz de Carvalho (2013) explain, to be effective serious games "must be motivating, enjoyable and create pleasure in the learner/player in order to build his/her knowledge" (p. 4). Indeed, as Fisher (2008) demonstrates, if students are emotionally invested, they are more likely to retain lessons learned.

Nearly every student response included expressions of their engagement including some emotional valence in reaction to their experiences with the module. Students often reflected on their emotional responses to their own outcomes - often a successful negotiation or the frustration of being excluded from a potential development stood out in their reflection. Other empathetic students carefully recalled the reactions of their peers, framing their dynamics as "greedy," "desperate," or "overjoyed" in a drama of negotiated exchange. For example, one student reflected that as the game went on, they and their fellow players become more emotionally invested. As they wrote, "Everyone was helping each other in the beginning, but as we got further into the game, people started to feel emotions about what happened to them during the game."

With AudaCity, some students expressed trepidation in anticipation of their gameplay experience. For these students, the instructors answered questions and encouraged the students by ensuring that the game mechanisms become easy to understand in practice. With this support, students engaged in their games with all groups completing several rounds of play. Of course, not every student met every learning objective in their post-play writing. A small minority of students came to the gameplay experience unprepared, uninterested, or reluctant to play. Despite the diminished participation of these few peers, their fellow competitors remained able to complete several rounds of the game and were equally able to attain the learning objectives in their post-play writing as students from any other group.

Most students, however, expressed positive reactions to the game in their reflective essays. In another example, one student diagramed the ebb and flow of emotional reactions in the simulation, writing:

"once we understood how to play, all of the players began to strategize more and fight for their own self interests… I often felt greedy as I tried to figure out how to get the maximum amount of rent money from the buildings that I constructed. I also felt guilty when I did not vote to support another player's building proposal, and I saw them get upset and disappointed. Therefore, I felt myself trying to make the other players feel better by offering them additional benefits that I had had access to as mayor such as building a road or a beneficial building with eminent domain. However, as the game progressed, I felt myself get increasingly discouraged. [Another student] was gaining a lot of money, and I was frustrated that I did not manage my money well enough to have the same success that he did. I was jealous of his success, but I was also wary of doing anything that would negatively impact him, as those actions would affect my buildings as well."

This student's writing highlights how they were emotionally engaged throughout the gameplay experience, even while the specific emotions they were experiencing varied in reaction to what was happening in the game. The student's emotional experience varied in relationship to particular choices and strategies in the game. The student not only reflected on their own emotional engagement, but worked to make the other players "feel better" as part of their strategy in playing the game. For them, this meant taking on the perspective of other players, which increased their awareness of the processes developing in their game.

Coalition Formation and Group Dynamics

The demonstrations of students taking on the perspective of their fellow players is important, because AudaCity is designed to have students take on both competitor and collaborator roles in their games. This is because the module is also intended to provide a platform for small-group dynamics that models the processes of coalition formation among interested actors in urban development. This aspect of the AudaCity module makes it potentially useful beyond urban studies classrooms, and for

any academic course that explores group decision-making, coalition formation, and social psychology.

Student descriptions of coalition formation and group dynamics in their post-play writing were encouraging for these reasons as well. As they experienced and observed the processes of coalition formation, students saw how players with competing interests could find mutually beneficial strategies and support each other through them. They also observed cases when players presented their strategies in misleading or disingenuous ways in order to attract other players into their coalition, but later did something to their disadvantage.

One student revealed that their strategy was "to keep people from joining forces against me by coming to an agreement with one of the involved parties, often to the loss of the other. This weakened their ties with each other, making at least one of them more likely to side with me." Further, they explained that their ability to convince other players that their own proposed development was actually beneficial to other players was an essential strategy for them. "The key to all of this," they added "involves proposing things that are greatly beneficial to you in a subtle manner, as if you're not aware of how much it helps you. Then make cases for how each decision you make actually benefits one or more of the other players."

Students who were not able to negotiate their way into a coalition were forced to watch from the outside, but were still able to observe the processes of coalition formation. We found several examples where students felt spurned by being left out of the decision making coalition - but this also heightened their determination to fight their way back into the in-crowd. One student explained that in their game, one coalition worked together round after round. It was difficult for another player to break into the coalition "because they trusted each other because of the previous times they worked together, they didn't want to work with anybody new." As this theme reveals, understanding and negotiating group dynamics is a central part of the learning experiences students have when taking part in the AudaCity module.

Descriptions of Urban Dynamics

The AudaCity module is intended to improve students' understanding and ability to describe urban dynamics and assess them through models of urban development. To assess how the module supported students' abilities in this area, we asked students to reflect on how any of the urban development theories they learned in their academic course could be applied to their game-play experience. Students demonstrated that they were able to use their experiences in the game to describe urban dynamics through a variety of models and course concepts.

In their post-play responses, students identified a number of urban development theories - including Park and Burgess' concentric zone, Lefebvre's place-value, and Hoyt's sector theories. They described these theories in their own words and applied their understanding of these theories to what they experienced in their games.

In the post-play writing assignment, students were specifically asked to explain some aspect of their game experience using either Logan and Molotch's (1987) growth machine model or Gottdiener, Hutchison, and Ryan's (2014) sociospatial perspective. The analysis of students' reflections revealed consistent evidence of students linking the growth machine model and their strategic game-play decisions. One participant observed power dynamics where, "All players had to make choices that benefited the community as a whole, but as the mayor, [student name] not only had to consider the residents of the community, but also satisfying her interests that would allow her to retain power." This same student went on to explain how a bribe to the simulation's mayor nurtured a future power-sharing coalition. "I bribed (the mayor) $3 to accept my proposal to build a mixed use area, and a coalition was born. I continued to provide monetary support for her as a mayoral candidate, and she continued to approve my building proposals." This student describes how they worked in collaboration with the mayor in a coalition around their shared interests.

While some students benefited from these cozy relationships, others revealed how they could be excluded from decision-making coalitions. One student observed

that some proposals were doomed because other players "would begin to place their proposals in a different block that seemed more personally profitable to them. When this would happen, the coalition that formed around the development of the original block would fail and a different coalition would form around the new block." In their writing applying the growth machine model, other students expressed that during the game they were concerned about "how much balancing the interests of different actors play a role in city development, and how more powerful players are able to exert their influence so that the city develops in a way that is personally beneficial to them." This is a particularly illustrative example that reflects the growth machine model because it shows the student describing how coalitions form and reform around specific development proposals that align with the interests of particular coalition members, to the exclusion of other actors in the city.

Students who chose to apply the sociospatial perspective to their gameplay experience also demonstrated an ability to illustrate how this model is useful for understanding urban dynamics. Students wrote about how players socially constructed meanings into particular locations on the board, just as the sociospatial perspective suggests inhabitants construct meaning into locations in their city. One student wrote that players almost never proposed developments on blocks they did not already inhabit. Reflecting on this, the student explained, "In other words, it was space that defined the nature of our relationships with each other, not just the ultimate goal of growth." In another reflection, a student explained that in their game, players "compared their projects" and discussed which would be "the most suitable ones in specific places." As they reflected, this meant not only that these developments "add[ed] value to the place," but also that the players felt the imagined communities on the board benefited from them.

Examples of how players gave meaning to specific locations on the board was evident throughout the students' writing as they applied the sociospatial perspective. The students, then, were able to explain how this model makes it possible to understand these social dynamics.

Another student who played the role of mayor in their game reflected on the potency of the meanings given to places as they were built on their board. This student explained how he used his special role as mayor to build a prison on a particular block. "As a result of me building a prison on that block," they explained, "I realized that no one else decided to build on that block for the rest of the game. This is a great example of the sociospatial perspective because the presence of a prison caused players to build their property elsewhere in the city."

These examples are representative of how students explained in-game development through the framework of the growth machine and sociospatial perspective models. Students analyzing the game through these models see how the models are useful in identifying relevant aspects of development processes. They are able to use the growth machine model and refer to gameplay experiences to describe the formation and activities of growth coalitions and their variously-interested members. They are able to use the sociospatial perspective and refer to gameplay experiences to describe how players socially constructed meaning into particular locations on the board, and how those meanings impacted the choices players made. Additionally, students were better able to assess how and why players made particular choices and how this impacted their prospects in the game. Rather than seeing the winners and losers of the game as "lucky," students realized that players who were best able to make use of their relative position, or best able to assess dynamics of coalition formation or the meanings associated with various locations on their board were most likely to do well. For students, reflecting on the game and writing about what happened in the game with reference to one of these models reiterated the lessons learned in the game while also affirming the usefulness of these urban studies models.

Generalizing to Real World Observations

Another theme found in student post-play writing also serves as an indicator of the utility of the AudaCity module. Students demonstrated an ability to generalize from the game to the real world. In many of the

post-play reflections students connected the game play to the development of recreational spaces, commercial districts, and housing developments in places they live or have lived. For example, one student compared the dynamics of their AudaCity experience to the dynamics of their hometown's newly built high school. This student explained that when the high school was built, property values and investment in nearby locations increased noticeably. "I had many people move in, or out, of my town due to the fact that we built a brand new high school. This caused taxes to rise, and more houses to be built. Some chose to leave because of the additional cost, but the houses were filled relatively quickly."

Another student took in the wider view, comparing the cities organically developed at the various tables in the classroom and likened them to the diversity of modern metropolises. "I found it very interesting how every table had a different style of city. The city that was in my table would be described as a Los Angeles. Another table had a city that resembled New York City. We were all affected as if we were actual people that constructed buildings in cities. I found it to be more realistic because we also all represented different parts of the city while playing the game." In referring to Los Angeles and New York City, this statement also illustrates how comparisons to real world cities allowed the students to give meanings to the style of development they saw in the city in their particular game.

In comparing their games to the real world, students also demonstrated a complex understanding of the perspectives and interests of real estate developers. Recognizing the role of the interests of capital in urban space, students saw how developers are motivated to earn a return on their investment. As one student wrote, "Money and social relations are some of the key points for a developer to have his proposal accepted and to be favored. This is a tangible occurrence in the real world as well: the more money offered, the more favored the developer is, and the best chance he has to build in the city which in turn will generate more profit." Another student generalized more broadly, writing, "The way the players give proposals each year and are almost fighting

over the most profitable property areas is very much like the real estate business in actual city development."

Other Applications and Further Consideration

While AudaCity was designed for urban studies courses, the game could be useful for other courses as well because characteristics of the game and gameplay experiences are relevant to a wide variety of courses and disciplines. Game mechanics focus on urban development patterns, growth coalition formation, and the social construction of meaning in urban space. Because the game models several aspects of cities, though, it also reveals patterns and processes of political power and economic stratification. Additionally, in allowing students to both compete and collaborate with a dynamic set of evolving relationships between peers, the game could be useful in many courses working to illustrate aspects of group processes. For all of these reasons, the AudaCity module could be useful in courses from political science and public administration, to economics, psychology, or philosophy.

While not every student in each of these classes demonstrated overt excitement about the activity, even reluctant students engaged concretely with their competitors in their activity. The professor from the liberal arts college classroom reflected, "It engaged all the students in the class, and got a number of them thinking critically about the role of politics and money." This professor found that AudaCity also "allowed some of the more advanced students to critically reflect on aspects of city life that the game could not model, such as cultural dimensions of space." This professor also noted that, "Perhaps the most pleasant surprise though was that all of [the students] really did throw themselves into the game, regardless of whether or not they were into gaming or were performing well in class."

In each of these courses, the instructors noted improvements in the general tone of the class atmosphere after the AudaCity activity, with students participating more frequently and more thoroughly in class discussion. Several students noted that they felt playing the game and writing the reflective essay was one of the

most effective learning experiences in their course. Another student wrote that "the game can really get people's blood boiling, but it's a lot of fun to play." Examining students' writing in these post-play assignments, we see that students engaged and emotionally invested in their games, that they observed and were able to describe coalition formation and other group processes, that they were able to apply course concepts in analyzing what happened in the game, and that they were able to generalize from their gameplay experiences to the real world. Each of these supports the value of the AudaCity module as a tool to support student learning.

Discussion

AudaCity is an educational board game in which players must weigh a variety of social and spatial factors which mimic the challenges real-world developers encounter. As players pursue their individual goals, they recognize that the best strategy for their own success is to create coalitions of shared interest and place developments with sensitivity to how their actions impact other players. Despite the open-ended framework of spatial development, patterns of spatial development and coalition formation reliably emerge as players experiment with various strategies.

Recognizing how AudaCity transfers lessons about the complexity of urban development, a student wrote, "One must understand how to balance capital, political power, as well as human networking in order to be truly successful in both the AudaCity game and also the game of life." These experiences facilitate learning for students of urban growth and development processes. While the game is comprised of individuals in competition, collaborations emerge each round as students form coalitions and advance collective goals. As another student explained, it is relationships with other players that define the game, writing, "Simply put it is the relationships and influence of those relationships within the political environment of the city that will largely determine the growth patterns seen there."

In developing AudaCity as a serious game, the creators worked to create a game that illuminates the com-

plex dynamics of urban development in ways that would facilitate students' abilities to apply urban studies theories and models to both the game and real-world situations. After implementing AudaCity in several courses, evidence emerged that demonstrates that students who have played the game are able to attain these objectives. The module also allows students to explore group processes in scenarios in which individuals are simultaneously competing and cooperating. Furthermore, students find value in the activity, as they demonstrate high levels of engagement with the gameplay experience. AudaCity, therefore, re-emphasizes the utility of a games-based learning approach and provides a new learning tool for urban sociology, urban studies, and other courses. As one student concluded, "The AudaCity board game was very educational, informative, and fun."

Acknowledgements

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Reading and Writing to Learn: Do Required Writing Assignments Promote Reading Compliance and Student Engagement in Social Science Classes?
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Abstract

Reading compliance predicts student success on exams and overall course grades (Sappington, Kinsey, & Munsayac, 2002), improves classroom dynamics (Burchfield & Sappington, 2000), and leads to greater understanding of course content (Ryan, 2006). When students fail to read it is problematic for professors, but employers also find that many college-educated employees are deficient in reading comprehension and writing ability (Jaschik, 2015; National Endowment for the Arts, 2007). A lack of reading and reading comprehension, therefore, has numerous negative consequences. This research project examined whether the use of required, prompted, low-stakes, written assignments based on assigned readings promotes compliance and engagement with course content in introductory, social science classes. Further, it examined whether the assignment promotes class participation and improves exam scores. The findings suggest that this intervention promotes reading compliance, engagement with the reading, and greater participation in classroom discussion. Student perceptions also revealed a generally positive attitude toward the assignment.

Keywords

reading compliance, community college students, journal writing, critical thinking

TEACHING REPORTS Reading and Writing to Learn *continued*

Introduction

Professors frequently confront classrooms full of students who have not completed the assigned readings. In social science courses, classroom discussions often draw upon the concepts, theories, and controversies presented in the reading. Under ideal conditions, students will bring their critical thinking abilities to bear on these ideas through an engaged, in-class discussion. When students do not read, it not only disrupts the lesson plan, but it can also negatively affect students' chances for academic success.

Students fail to complete the assigned reading for a variety of reasons: poor time management, the belief that they can read everything immediately prior to an exam, the idea that they can glean sufficient knowledge from lectures (Bartolomeo-Maida, 2016), being too busy, or just being forgetful (Hoeft, 2012). Other reasons may include: lack of student motivation (Rothkopf, 1988), poor understanding of the role of the assigned reading or what is expected of them (Brost & Bradley, 2006; Maher & Mitchell, 2010), or a lack of useful exercises in class that help students see the purpose of the reading (Sappington, Kinsey & Munsayac, 2002). One study found that 75% of students believed that simply by attending class they could earn a C, even if they did none of the reading (Berry, Hill, Cook, & Stevens, 2011). Research has identified several strategies that professors use to encourage compliance such as online quizzing on material that has yet to be reviewed (Howard, 2004; Johnson & Kiviniemi, 2009), random in-class quizzing (Fernald 2004; Ruscio, 2001), having students generate questions from the reading (Henderson & Rosenthal, 2006), and both calling on students randomly and assigning homework about the reading (Schnee, 2017). Despite these efforts, reading compliance continues to be a significant concern (Burchfield & Sappington, 2000). More research is needed to develop interventions that improve reading compliance and comprehension, student engagement, as well as critical thinking and writing skills (Bean, 2011; Sappington, Kinsey & Munsayac, 2002).

Reading compliance is important because it predicts higher exam scores and overall course grades, both common measures of student success (Sappington, Kinsey, & Munsayac, 2002). Furthermore, students who complete reading assignments report greater understanding of concepts and course materials (Ryan, 2006). Encouraging students to complete assigned readings is particularly important for community college students, many of whom are academically underprepared (Grubb, 1999; Perin, 2013). Poor academic skills predict non-compliance with assigned reading (Long, 2009) and when students fail to read, they lose the opportunity to practice and improve those skills. This cycle of avoidance may have implications that reach beyond the classroom. Employers, for example, are increasingly reporting reading and writing deficiencies among new college graduate hires (Jaschik, 2015; National Endowment for the Arts, 2007). As such, finding methods to encourage reading compliance while developing comprehension and writing skills could promote academic success and help develop the abilities necessary for successful workforce participation (Starcher & Proffitt, 2011).

This research examined whether the use of a required, prompted, weekly writing exercise based on assigned textbook readings promotes reading compliance and student engagement with the literature in introductory classes, and improves classroom participation. Students were required to complete a learning journal entry based on class readings, once per week for 10 weeks during the 12-week semester (see Appendix A for the learning journal prompts). Although there is some evidence that short periodic quizzes, or even the threat of quizzes, may increase reading compliance (Clump, Bauer, & Bradley, 2004; Ruscio, 2001), it is not clear that they encourage the kind of student engagement with readings that promotes comprehension and critical thinking. Some scholars contend that quizzes function as extrinsic motivators (Starcher & Proffit, 2011) and are teacher-centered, rather than designed to improve student learning outcomes (Henderson & Rosenthal, 2006). Students may also perceive quizzes as punitive which can impair the professor-student relationship

(Carney, Winstead, Gabriele, & Ballard, 2008; Connor-Greene, 2000). The purpose of the learning journal assignment, therefore, is twofold: to ensure that students have done the reading, and to encourage student engagement through what the Writing Across the Curriculum (WAC) pedagogical approach calls, "writing to learn" (Emig, 1977; Forsman, 1985).

WAC is a pedagogical movement that, for more than three decades, has endorsed using writing as a teaching and learning tool that can be used to help students master discipline–based knowledge, and develop the writing and critical thinking skills that are necessary for success in all their classes and beyond (Bean, 2011). WAC encourages the assignment of both "high stakes" writing such as more formal, graded term papers and essays, and "low-stakes" writing such as "free-writing" and journaling (Elbow, 1997). At the urban community college where this study was conducted, WAC-based classes are designated as "writing intensive" and have their registration capped at 25 rather than 41 students, enabling faculty to interact more closely with students to provide more feedback on written work. For this project, the intervention under investigation was a "low-stakes" exercise employed in large, introductory courses in American government and psychology that were not designated as writing intensive.

Previous Research

The writing assignment was previously tested by one of the researchers in psychology classes in Spring 2014. Results from the initial study pilot in two developmental psychology courses, both of which were assigned the journal intervention, revealed that 89.3% of the 75 students enrolled made some attempt to fulfill the journal assignment (Bartolomeo-Maida, 2016). However, only slightly more than half of the students (53.7%) completed all the chapters and answered all four prompts required for the assignment. Self-report data from these classes indicated that 41.6% of students were not reading for their other classes, but one positive take away from the preliminary data is that the majority of students in this sample attempted to complete some read-

ing for the psychology courses. The majority of students reported that they owned a textbook, which can be an issue for community college students, and only 13.1% of students indicated that they did not read at all. When they were asked to indicate reasons why they are not reading, 46.3% of students reported that they had difficulty finding the time to read. Self-reported data from the surveys suggested that students favored the low-stakes writing in comparison to other forms of writing, such as a term papers, and felt that the assignment allowed them to think critically, apply the material they were learning about, and have another opportunity to express themselves (Bartolomeo-Maida, 2016).

In Fall 2014 the researchers collaborated to expand upon the initial pilot. A modified version of the assignment was administered to a sample of 66 political science and psychology students. Only 4.76% of the students reported that they did not read at all for the class, but when asked if they read for other classes, the number that reported not doing any of the reading was 18.85%. Hence, it is possible to extrapolate that the journal assignment incentivizes reading. Similar to the initial pilot, the data from the second study supports the finding that students experienced challenges keeping up with the reading and a significant number reported having difficulty finding time to complete assignments (42.10%). Overall, however, and similar to the initial pilot, students reported seeing value in the assignment; 72.12% agreed that the assignment fostered critical thinking and 75.43% agreed that it gave them an opportunity to express themselves.

The current project sought to more rigorously examine whether reading compliance can be achieved through the use of a graded, weekly writing assignment by adding control classes for comparative purposes. Students in both the control and learning journals sections were surveyed about their reading habits for this and other classes. Students who participated in the intervention were surveyed about their experience with the learning journal assignment. The researchers looked at participation grades and, given the findings of previous research indicating the positive effect of reading on test scores

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(Johnson & Kivinkiemi, 2009; Sappington, Kinsey, & Munsayac, 2002), we also considered exam grades.

Research Methodology

Procedures

The research was conducted in the fall 2015 and spring 2016 semesters. In fall 2015, one of the researchers taught two sections of American Politics and Government (POL 51). In spring 2016, the other researcher taught two sections of Introductory Psychology (PSY 11). One section of each course was assigned the learning journal and the other class served as a control. During the 12-week semester students were asked to complete learning journals for ten assigned readings from the text-book for political science and nine chapters from the text and one scholarly article in psychology. Because writing and thinking about the reading is essential to class participation, students were expected to prepare their journal entries prior to the class in which the reading was being discussed and to submit them either in printed form at the beginning of class, or electronically in advance of the class meeting. Students were asked to respond to four open-ended prompts for each journal entry including, "which two items were the most interesting to read about and why?", and "reflecting critically on this chapter, what important issues does it raise that could be/ need to be addressed further?" The researchers provided guidance on how to complete the assignment and sample entries were disseminated to give students an understanding of what constituted good and poor quality entries (see Appendix A for all four prompts). The researchers also conducted a mini-lesson that discussed the process of critical thinking and how it specifically applied to the learning journal assignment.

In an attempt to ensure that students took the assignment seriously, the learning journals were worth 20% of students' overall grade. Other than the journal assignments, both the intervention and control classes were assigned the same work, which included in-class exams and a final exam, an additional formal writing assignment, and grades for class participation.

Participants

There were 135 students enrolled in the four sections; 33 in the control section and 25 in the learning journal section in psychology, and 39 in the control section and 38 in the learning journal section of political science. 110 students chose to participate in the study by completing the surveys at the end of the semester, yielding an 81% response rate. Of those students, 47 were registered in the psychology classes and 63 were registered in the political science classes. The majority of the students in the sample were Liberal Arts majors, and 43 identified as male and 66 as female. A majority of students in both the control and journal classes were also engaged in paid employment. In the control classes, 69.64 % students said they worked, with 31.57% reporting that they worked over 30 hours per week. In the learning journal classes, 66.67% said they were working, and 40.0% said they worked 30 hours or more. The overall grade point average for this sample was 2.3.

Data Collection/Specific Assessments

Journals were awarded up to two points reflecting an assessment of how effectively the students provided written evidence that they had both completed and engaged with the reading. The assessment of the journal entries included a number of considerations such as whether or not students simply summarized the reading or were able to engage with it in a meaningful way, apply the material to their lives, and generate examples (see Appendix A for the grading rubric). After the first set of journals was collected in each class, the researchers spent time grading entries collaboratively to ensure consistency in evaluation. The students were given written feedback suggesting ways to improve future journals that included asking them to show a deeper connection to the reading, expand on their thoughts, and address any prompts that were omitted. Examples of high quality journals were also shared aloud in class.

At the end of the semester, students in the learning journals classes were asked to reflect on whether they thought the journal assignments encouraged their reading compliance and how their experience in this class compared to their experiences completing readings for other classes. Ideally, we hoped that students would report that the journals encouraged reading compliance and engagement with the reading. Even if not enthusiastic about the assignment, students might still recognize that it served a useful purpose. In addition, students in both the learning journal and control classes were surveyed about their general reading habits such as time spent reading, reasons for not reading, and other issues such as time spent working in paid employment (see Appendix B for the survey). Finally, to the extent that the journal assignment might increase and improve engagement with the reading, we also hoped that we would find evidence of higher participation and exam grades in the learning journal class. This research study was approved by the University's Institutional Review Board and funded by a Community College Collaborative Incentive Research Grant (C3IRG) from the City University of New York.

Results

Qualitative Findings

Students were asked what they liked and disliked about the learning journal assignment and what they felt could be changed or improved. Positive assessments of the learning journals included the students' perception that the assignment made it necessary for them to read, and that it helped prepare them for class discussions and exams. Some students who were critical of the assignment felt that the reading and writing load was too heavy (see Table 1).

Most of the students in this study purchased the textbook; 92.59% of students in the learning journal classes and 80.35% in the control classes. However, 17.85% of students in the control class responded that they did not have the text compared to only 1.85% of students in the learning journal class. While there were students in both the learning journal and control classes who did not purchase the text, fewer students in the control group made use of the copy on reserve in the library. One student noted that she does not usually buy the textbook for her courses because "not many classes use the book," therefore buying it was perceived to be a waste of money. The student did note, however, that "when I would read or look over the book, I got a better understanding and it helped me to know what to talk about." Another student confessed, "to be honest, I don't usually read textbooks if my teacher says to. I never even bought the text for my [other classes], unless there is a specific assignment attached to the reading." However, the student added that having the text for the class was beneficial because doing "these readings helped me be more prepared for tests." For this student, the assignment made having and reading the book necessary. Over 75% of the students indicated that were it not for the learning journal assignment, they may not have done the reading and 79.62% of students said that they read most of the chapter in order to complete the learning journal.

Among the aspects that students liked about the journal exercise included that it allowed them to focus on a single chapter and one set of discussion topics for the week. Others remarked, "that I can express myself freely" and liked the fact "that it asked for my opinion." While both researchers certainly encouraged students to raise questions in class, one student said that, "I like that we can ask questions in the journal that we are too embarrassed to ask in class in front of everyone." The journal, therefore, may be a more comfortable space for some students to raise questions. Students even recognized the journal as an important space to practice critical thinking skills: as one student explained, "You really had to put your mind into it." Another noted that they "liked doing critical analysis after each reading, asking questions and thinking about what we read." One student admitted that, "the journals forced me to read. Therefore, I'm more prepared for class." Another noted that the journals, "...prepared me for my exams and it is such a simple way to boost my grade overall." One student surmised that the journals "... felt like preparation for class discussion," which of course is ideally what the assignment was intended to be. One student even said that "I was able to open my eyes to [the importance of] actually reading the textbooks to understand [the] topics more."

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A number of common themes emerged in students' assessment of what they did not like about the assignment. Responses included feeling that a weekly written assignment was overly burdensome, that the reading load for the class was too heavy, it was difficult to print out the assignments, and that it should be optional or extra credit. Some other students would have preferred to complete the journal without having to address specific prompts or questions and also suggested that there should be fewer journals required. Finally, another student suggested that, "all the journals should be handed in before the final class which would give students a chance to catch up on the reading and missing work," which, while possibly more convenient for the students, defeats the purpose of the assignment.

Overall, most students had positive things to say about the journal exercise, the number of journals required, and the readings they were based on, but the practical considerations of typing and printing them out on a regular basis were an issue especially for the many students who lack access to printers at home. However, students did not express a clear preference for submitting the journals online; only 46.92% indicated they would have preferred to do so.

Quantitative Findings

In the classes assigned the journals, the majority of students at least attempted the assignment, showing some reading compliance. In the psychology class, 33% of the students completed all ten of the journal assignments, while 50% of the class completed six or more. Twenty percent of the students in psychology completed three or fewer and only one student did not complete any journal assignments. In the political science class, only 10% of the students completed all ten of the journal assignments, although 61% completed six or more, and, again, only one student did not complete any journals. The average number of journal entries completed in both the political science and psychology classes was 6.4 (see Table 2). The average score on completed journals was 1.37 in the political science class and 1.5 in the psychology class, with an average score across both classes of 1.4. Based on our rubric, students' scores on journal

entries indicate that they were not merely summarizing, but were beginning to engage deeply with the reading (see Table 2 and Appendix A for the grading rubric).

Assignment effectiveness in promoting reading compliance.

Self-reported data from our sample indicates that across all four classes, 77.98% of students read for 1-5 hours per week, 11.92% indicated that they were reading 6-10 hours per week, and only 10.09% reported that they were not reading at all (see Table 3). There was a relationship in the amount of hours reported reading and condition, x^2(3, N=109) = 9.63, p = .022, Cramer's V = 0.3. Specifically, the odds that the control group did not read compared to the journal group was 10 to 1, x^2(1, n=11) = 7.364, p = .007; in the control group 17.85% of students reported not reading at all whereas in the journaling class only 1.88% indicated no reading. The odds that someone in the journal group compared to the control group read for 6 hours or more a week was 2.25. The odds of reading 1-5 hours a week were roughly equal between the journal and control group at 1.02. While there was not a difference in the amount of students who read between 1-5 hours, probably in part to the fact that the survey response category was too broad, more students in the learning journal group indicated reading 6-10 hours (15.09% in the journal group and 7.14% in the control section). Across all four classes, 31.37% of students noted that they do not read for their other classes. For those who do not read or read minimally, whether for our classes or others, the most common reason was that they don't have the time (33.05%) or that they get more from class lectures (30.50%) (See Tables 3 and 4).

Participation grades, exam scores and journaling and survey responses.

As previously noted, students in all four sections were assigned participation grades. These grades were assessed by faculty in each of the classes reflecting both a concern for the quantity as well as the quality or pertinence of students' contributions, the most valuable of which reflected evidence of reading and critical engagement.

Students receiving a grade in the A range for example, participated in each class, initiated discussions and reflected on information in the textbook, made relevant and accurate comments based on the reading, and raised critical questions. The students were informed at the beginning of the semester about these expectations for participation.

A Pearson chi-square that was utilized to examine students' class participation grades (ranging from A to D) revealed a significant relationship between the journal manipulation and final participation grade, x^2 (3, N=109) = 9.82, p <.02, Cramer's V = 0.3, where higher grades were found in the journal group (see Table 5). Furthermore, students who completed more journal entries were more likely to get a higher participation grade after accounting for GPA, $x^2{}^{Wald}$(1) = 4.76, p = .029, OR = 2.5, 95% CI [1.09, 5.7]. When using the B grade as the reference group in comparison to other grades, a nominal regression demonstrated an increase in the likelihood that a student would score a B compared to a C (B = 1.48, SE = .59) or D (B = 2.93, SE = 1.19) as a result of having done the journals, $x^2{}^{Wald}$(1) = 6.21, p = .013, OR = 3.49, 95% CI [1.37, 14.04]; $x^2{}^{Wald}$(1) = 6.06, p = .014, OR = 18.76, 95% CI [1.82, 193.71]). Although other researchers have found that reading improves exam scores, when collapsing across class type, an independent t-test revealed no significant difference in exam grades between the journal group (M = 77.29, SD = 16.55) and the control group (M = 71.77, SD = 17.61), t(107) = 1.69, p = .095, d = 0.32, 95% CI [-12.02, .97]. (See Table 5)

The journal class survey responses also reveal a number of noteworthy correlations. Supporting the data above about participation grades, we found a positive correlation between the number of completed journals and students' perceptions about their ability to participate in class discussions: r(51) = .37, p = .006. Lastly, higher participation scores related significantly to students' self-reported ratings that their overall knowledge of the academic discipline was enhanced as a result of completing the textbook reading, r(51) = .37, p = .007 as well as keeping up with the reading, r(51) = .30, p = .031.

Data from the student survey also revealed that students who received higher average scores on their weekly entries, were more likely to self-report that they believed they could relate the course content to real world/personal experience, r(50) = .32, p = .02 and that they believed it was necessary to read the whole chapter in order to write a meaningful entry, r(51) = .35, p = .01. Additionally, an increase in journal entries significantly related with their perception of a better ability to keep up with course readings, r(50) = .60, p < .001, and with less difficulty in finding time to commit to journals, r(51) = -.41, p = .002. Hence, there is evidence that the journal assignment makes reading more necessary, forcing students to prioritize reading.

Discussion

This study examined the potential uses of a writing-to-learn journal assignment in promoting reading compliance, students' experiences of completing this assignment, and whether it promoted class participation and critical engagement with class readings. There is evidence that the journaling leads to higher class participation grades and evidence from the self-report survey that students perceive that the journaling assignment promoted reading compliance and participation in class discussions. Hence, we believe the assignment has utility in encouraging students to read for class. In addition, students' performance on the journals demonstrated critical engagement with the readings that was also evident in their class participation when compared to the control classes. Based on previous research, we hoped to see evidence that journaling also improved exam performance; however, this was not found. Although initially we saw slightly higher average exams scores in the journaling classes (75 versus 70 in political science and 76 versus 75 in psychology), ultimately this was not statistically significant. This could be due to the fact that exam questions were more mastery-based, whereas the journal prompts encouraged reflection and critical analysis. Perhaps journaling would have had a more positive impact on scores, if exams had been designed to more directly link with the content and skills students use when completing their journals. In fact, 70.37% of students

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noted that the learning journals made them think about the material differently than the reading they do for an exam. Furthermore, while students scored fairly well on the journal entries, they were not receiving perfect scores, nor did they complete all entries. It is possible, therefore, that they were not picking up on all of the details from the chapter that might have helped them on an exam. In addition, community college students tend to struggle with time management, have test anxiety, and lack test taking skills which may require more than journaling to overcome.

Some limitations of the study should be addressed. While the researchers added a control group to make the examination of the learning journal intervention more rigorous, the sample size was small, as the study was conducted with data from only one semester per each academic course. Because the data was collected at one institution, it could be hard to generalize the findings to students at other types of colleges. There are also limits to self-reporting of reading compliance. Finally, the researchers were also the course instructors. To account for possible researcher bias, it would be useful to include a research assistant, who is unfamiliar with the details of the study, who would observe and rate classroom participation.

The findings of this study suggest avenues for future research. A large-scale study, involving faculty across various disciplines to assess what strategies they employ to motivate students to read, and to encourage them to engage with and to think critically about the reading, would be useful, adding to Schnee's (2017) quantitative research, also done at our college that examined student and faculty thoughts about assigned reading. Additionally, it could be valuable to examine different types of assignments such as a reflective journal compared to a prompted journal, or another type of writing assignment that requires student engagement, to determine if they promote different levels of engagement with the reading.

Future research should examine the extent to which students complete textbook reading versus other kinds of assigned reading such as open access textbooks, schol-

arly articles, or briefer readings such as blogs and other online sources, and newspaper and magazine articles. Students enrolled at community colleges are often ill prepared for the college level work they will encounter (Grubb, 1999; Perin, 2013) and may lack not only knowledge related to specific disciplines, but they may also be unfamiliar with what is expected of them at the college level. They may have been socialized to memorize and take tests rather than think critically about and interact actively with the material they are reading (Linderholm, 2006; Roberts & Roberts, 2008). It is clear from our sample that most students (71.28%) have not previously done similar weekly journal assignments in other classes and may believe they could get by on passive reading. As other scholars have demonstrated, students need to be taught how to journal properly, to generate questions from the reading, and to learn how to learn (Eliason, 2009; Henderson & Rosenthal, 2006; Maaka & Ward, 2000; Starcher & Profitt, 2011).

A few practical questions should also be considered when using a learning journal, or similar assignment. It would be helpful to think about what percentage of the overall grade an assignment of this nature would be most appropriate. Like other researchers (Fritson, Forrest, & Bohl, 2011; O'Connell & Dyment, 2006), we wondered if the journals should have been worth more than 20% of the grade. Pertaining to the grading of this assignment, some students resented the fact that they did not get full points on the journal when they felt they devoted a lot of effort. While this may be true of any assignment, the researchers wondered whether it would have been useful to employ a different grading system, more commonly used with low stakes writing, such as awarding a check, check plus, or check minus to the assignment. This grading method allows students to earn full credit for completing it, while getting a sense of how they performed without being penalized. Evident in the pedagogical literature on this topic and confirmed by our students' survey responses, is that students often do not read if they do not perceive there to be a purpose to the reading (Brost & Bradley, 2006; Henderson & Rosenthal, 2006; Linderholm, 2006; Solomon, 1979). One option would be to be more explicit about the way

that each assignment will serve as a basis for students to initiate classroom discussion about each chapter. In addition to writing about the reading, if students also knew they would be responsible for starting a discussion in class based on their remarks, perhaps there would be more "buy-in" to complete assignments and engage more deeply with the reading.

One of the most challenging aspects of this type of assignment is the time burden it places on faculty members. This is particularly true at community colleges. At the college where this research was conducted, the teaching load is five, three-credit courses in the fall and four in the spring. Additionally, courses can have up to 41 students. It is daunting for faculty who may have up to 200 students in a semester to conceive of implementing graded learning journals in every class section. Considering the time commitment to grading this type of assignment, as others have noted (Hettich, 1990), it might also be interesting to develop and study a peer-to-peer form of evaluation to prevent burn out that may discourage faculty from assigning additional writing.

Conclusion

The findings from this study contribute to the discourse on classroom pedagogy and provide evidence that requiring students to write about assigned readings promotes reading compliance, student engagement with the readings, and class participation. We found that students who completed weekly written assignments about class readings had better participation grades and said they felt more prepared for class discussion. Students' perceptions of their improved abilities have implications for community college, because so many of our students are underprepared and under-confident in their abilities. This study also suggests additional research. While Writing Across the Curriculum encourages writing to learn and eschews quizzes and multiple-choice exams as assessment measures, the extent to which WAC methods are employed, especially in high enrollment courses that are the norm at community colleges, is unclear. Additional research about the methods faculty, especially those outside English and developmental skills cours-

es where it is expected that reading and writing will be emphasized, actually use to engage their students, to develop reading skills, and to promote critical thinking in contexts in which the course load and enrollment is high, may suggest best practices for a variety of teaching contexts.

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Table 1

Learning Journal Survey Responses

	Agree %	Disagree %
I stayed up to date generally with the learning journals for each chapter	62.26	37.73
If It were not for the learning journal, I may not have done the textbook reading for this course	75.92	24.07
I had a very hard time finding time to do the learning journal	46.29	53.70
As a result of this learning journal, my ability to participate in class discussion was enhanced	75.92	24.07
As a result of this learning journal, I was more prepared when it came time for exams	72.22	27.77
The learning journal assignment fostered my critical thinking skills	83.33	16.66
In order to write a learning journal, I read most of the chapter	79.62	20.37
As a result of the learning journal assignment, my reading skills improved	50.00	50.00
I would recommend that this assignment be given again to future classes	79.24	20.75
I prefer having the learning journals assignment instead of a term paper	81.48	18.51
The learning journals gave me another opportunity to express my thoughts in addition to class discussion	87.03	12.96
The learning journals made me think about the material differently than the reading I do for an exam	70.37	29.62
I would have preferred for the learning journal assignment to be more open ended (without the four specific prompts)	51.85	48.14
I could have put more effort into the learning journal	79.62	20.37
The exams motivated me to read more than the learning journals	61.11	38.88
I would have preferred for the learning journals to be submitted online	46.29	53.70
I was clear on how to do the learning journal	87.03	12.96
The learning journal enhanced my ability to apply the material we are learning about to the real world/my own personal circumstances	84.90	15.09
As a result of the textbook reading, my overall knowledge of Political Science/Psychology has been enhanced	92.59	7.40

N=54 Note. Agree includes students who strongly agreed and agreed. Disagree includes students who strongly disagreed and disagreed.

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Table 2

Total Journals Completed for Political Science and Psychology Classes

Number of Journals	Number of Students	Percentage
4 or fewer	12	22.64%
5-6	15	28.30%
7	8	15.09%
8-10	18	33.96%

N=53

Table 3

Amount of Hours per Week Spent Reading for Class

Hours Spent Reading	Journal Class	Control Class	Classes Combined
Not reading at all	1 (1.88%)	10 (17.85%)	11 (10.09%)
Between 1-5 hours	43 (81.13%)	42 (75.00%)	85 (77.98%)
Between 6-10	8 (15.09%)	4 (7.14%)	12 (11.92%)
Over ten hours	1 (1.88%)	0 (0%)	1 (0.09 %)
	N=53	N=56	N=109

Table 4

Reasons for Not Completing the Assigned Reading

Reasons for not Reading	Learning Journal Class	Control Class	Classes Combined
Lack of time	17 (39.53%)	22 (29.33%)	39 (33.05%)
Get more from lectures	9 (20.93 %)	27 (36.00%)	36 (30.50%)
Material is not interesting	7 (16.27%)	7 (9.33%)	14 (11.86%)
Too many details in the text	4 (9.30%)	6 (8.00%)	10 (8.47%)
Doing well without having to read	2 (4.65%)	6 (8.00%)	8 (6.77%)
Don't understand or don't like the textbook	3 (6.97%)	4 (5.33%)	7(5.93%)
Checked off more than four reasons	1 (2.32%)	3 (4.00%)	4 (3.38%)
	N=43	N=75	N=118

Note. N represents number of responses. Some students indicated more than one reason, which is why percentages exceed 100%

Table 5

Participation Grades

Grade	Journal Class	Control Class	Classes Combined
A	12 (11.01%)	13 (11.93%)	25 (22.94)%
B	21 (19.27%)	9 (8.26%)	30 (27.52%)
C	18 (16.51%)	26 (23.85%)	44 (40.37%)
D	2 (1.83%)	8 (7.34 %)	10 (9.17%)
	N=53	N=56	N=109

TEACHING REPORTS   Reading and Writing to Learn *continued*

Appendix A: Learning Journal Prompts and Grading Rubric

Journal Prompts:

In 1-1.5 typed pages, respond to the following questions per each journal entry:

1. Which two things were the most interesting for you to read about in this chapter and why?

2. How does this chapter relate to you and/or the people in your life in some way? AND
   Why is it important for you to have knowledge about the content of this chapter?

3. Reflecting critically on this chapter what important issues does it raise that could be/ need to
   be addressed further?

4. Generate at least one question that came up for you as you were doing this reading.
   This question should be something not easily answered from doing the reading. It should be thoughtful.

Grading rubric:

Excellent (2 points) - Student addressed all questions with clarity and depth. Student meets or exceeds suggested length of journal entry and raises relevant issues and vital questions. Student shows critical exploration and application of the questions and sound comprehension of the material.

Good (1.5 points) - Student addressed all questions with clarity. Student meets length of journal with satisfactory level of depth. Student raises relevant issues and shows exploration of the questions. Student can apply the material and comprehends it.

Fair (1 point) - Student shows exploration of the questions but answers do not meet the requirements for the entry. Student did not answer all questions or there is only a basic demonstration of comprehension and application.

Unsatisfactory (.5-0 points) - Student answers do not show depth and clarity. Student does not show comprehension and application of the material. Answers seem superficial and student does not raise questions and issues.

Appendix B: Demographic Survey (Control and Journal Class)

Demographic Survey

Instructions: Please complete this form to the best of your ability by selecting the choice that suits you best and/or filling in the blanks.

1. Gender: ❏ Male ❏ Female

2. How many credits have you already completed at KCC? _____

3. What is your GPA? _____

4. What is your academic major? _____

5. How many total credits are you taking this semester? _____

6. Are you working?

❏ Yes ❏ No

If yes, please indicate how many hours you work per week: _____

7. Are you involved in any other activities besides school and/or work?

❏ Yes ❏ No

If yes, please indicate the activity(ies) and how many hours you spend doing this: _____

8. Do you have a textbook for this class? ❏ Yes ❏ No

   If no, please indicate the reason: _____

   _____

9. How many hours do you spend reading for this class per week?

❏ 0 hours ❏ 1-5 hours ❏ 6-10 hours ❏ 11-15 hours ❏ above 15

10. If you are not reading at all, or if reading is minimal, what are the reasons why (check all that apply)?

❏ Not finding the time

❏ The material is not interesting to me

❏ I don't understand or don't like the textbook

❏ There are too many details in the book

❏ I get more from classroom lectures

❏ This class is not as important as some of my other classes

❏ I am doing in well in class without having to do the reading

Other: _____

_____

11. Do you generally do the textbook reading for your other classes?

❏ Yes ❏ No

If no, why not? _____

_____

12. Have you had to do learning journal type assignments in any of your other classes?

If yes, please explain: _____

_____

Thank you so very much for taking the time to do this. Your feedback is extremely valuable!

TEACHING REPORTS

Impact of a self-paced face-to-face format in a developmental writing course.

— Daniel Beugnet

Daniel Beugnet is an associate professor of English at Tallahassee Community College where he teaches courses in college composition, developmental writing, and English as a second language. His teaching and research interests include the impact of flipped learning teaching methods in college composition and developmental education. He holds a master of science degree in English Education with a concentration in community college teaching from Florida State University.

Abstract

This article reports the results of an action research study carried out in a developmental writing course. The study measured the impact of implementing an instructional approach in which students enrolled in a traditional, face-to-face course were provided, from the start of the semester, with instructional videos, course readings, and assignments that were intended to provide all of the instruction necessary for students to master the course content and were permitted to complete the course requirements at their own pace, while still imposing deadlines and an attendance requirement. This instructional approach drew on theory and research related to the widely popular "flipped classroom" approach. The results indicated that students successfully completed the course in higher numbers than their counterparts who enrolled in classes taught in a more traditional, lecture-based format. A survey instrument also found that student dispositions toward the instructional approach were overwhelmingly positive..

Keywords

flipped classroom, self-paced instruction, developmental education, hybrid courses

Much attention has been given in recent years to the nearly two-hundred-year old field of developmental education (Boylan & White, 1986) and to those individuals, both educators and students, who inhabit the campuses and classrooms where developmental education is carried out. This attention has come from policymakers, special interest groups, and the media. Much of this attention paints an unflattering picture of the work of developmental education. Critics contend that required developmental education courses represent unnecessary barriers to college completion, forcing students to spend multiple semesters completing coursework for which they receive, in most cases, no college credit. One of the most visible of these critics, the special interest group Complete College America, published a scathing 2012 report in which the group pointed to the high costs of developmental education, which Complete College America put at $3 billion annually, dismal completion rates of only 40% for students in developmental education programs, and even worse graduation rates, with fewer than 10% of students graduating with a degree or other credential within three years (Complete College America, 2012). Supporters of developmental education, who include expert practitioners who have spent their careers working in this field, frequently point to flaws in the research methodologies employed by Complete College America and other critics, citing an over-reliance on aggregate data, which obscures the successes of established developmental education programs while reflecting a greater emphasis on less established pro-

grams, particularly those at small, rural institutions that have fewer resources (Goudas & Boylan, 2012). Not surprisingly, developmental education experts are quick to point out, these data track closely to the relative successes and failures of community colleges throughout the country (Goudas & Boylan, 2012). The community college sector is home to by far the largest numbers of developmental education enrollees. Graduation rates at community colleges nationally stand at only 21% of enrolled students graduating within two years (Juszkiewicz, 2015). Research published by the Community College Research Center (2016) has also shown that graduation rates vary significantly by state and locality, suggesting that state policies and funding models contribute to the relative successes and failures of institutions nationwide (Jenkins & Fink, 2016). Given the geographic dispersion of community college campuses, with large, successful, and well-funded institutions predictably located in the nation's largest urban centers, and small, struggling, and underfunded institutions located in isolated rural areas, it is unsurprising that significant disparities exist between institutions.

Nowhere in the country has the debate over developmental education been more consequential than in Florida, where in 2013 the state legislature passed into law a statute that very nearly eliminated the ability of Florida community colleges to require completion of developmental education courses. Under the legislation, community colleges were prohibited from even requiring placement tests to gauge students' academic preparedness. Early drafts of the legislation applied these restrictions broadly to all entering community college students, though the final draft which became law allowed institutions to continue requiring developmental education courses for the most vulnerable students: students who received nonstandard high school diplomas, such as those awarded to students with disabilities, students from out-of-state who may not have met the same requirements for high school graduation as students in Florida, international students, and those who earned a GED. However, the legislation required that instructional innovations be implemented that would allow

students to complete developmental education requirements more quickly.

The developmental education program at Tallahassee Community College (TCC), in which I have worked for the past seven years, has long been considered a model for other programs throughout the state of Florida and across the country. While programs at other institutions consistently produced course pass rates below 50% (Edgecomb, 2011), success rates in TCC's developmental education program frequently averaged 70% in the years before developmental education reform in Florida, the result of a combination of student support services, a dedicated faculty of career developmental educators, and an innovative curriculum that emphasized active learning. Students completing developmental education did better, on average, in gateway English and mathematics courses than their peers who did not complete developmental education courses.

Another distinguishing characteristic of TCC's program is its compactness. Where other institutions require as many as four levels of developmental education each in reading, writing, and mathematics (MDRC, 2013), TCC's program has over the past decade required only two. Prior to 2007, TCC required a single level of developmental education, adding a second level only when student success rates indicated a need for it. These factors allowed TCC to adjust to developmental education reform with greater ease than other institutions in the state. Responding to the state mandate to implement instructional reforms within one year, the developmental education faculty at TCC implemented a range of them, including a modularized developmental reading course, courses that combined first and second level developmental writing and mathematics, and a co-requisite model that combined a developmental writing course with the college's existing college composition course. In spite of the frenzied environment created by this legislation, a spirit of collaboration and innovation emerged within TCC's developmental education program. Faculty members sought out new ways of organizing their courses through attending national conferences, pursuing continuing education, and sifting

through scholarly journals. Faculty met more frequently to exchange ideas, and we tried out new strategies in our classrooms, all the while supported by the college's administration, which wisely recognized the need for our programs and services.

It was out of this environment of instructional collaboration and innovation that the study under discussion here emerged. As I reviewed the literature and attended conferences, references to the flipped classroom approach were commonplace, with both researchers and practitioners documenting its positive effects. In this approach, activities commonly assigned for completion outside of class, such as problem sets in mathematics courses and essay tasks in writing courses, are completed during class time, while direct instruction is provided outside of class. Central to this approach is the use of brief digital videos that provide much, if not all, of the direct instruction for the course. The contact hours for the course are dedicated to completing exercises, discussions, demonstrations, and a variety of other active learning experiences. Although this approach to teaching is a relatively recent innovation, appearing widely in academic journals only in the past decade, after the widespread use of learning management systems made this approach feasible, a relatively large body of research has been produced documenting the promise of flipped teaching methods (Bhagat, Chang, & Chang, 2016; Schultz, Duffield, Rasmussen, & Wageman, 2014; Sharma, Lau, Doherty, & Harbutt, 2015).

Not long after the implementation of developmental education reform in Florida, I began to investigate the ways in which I might deploy a flipped classroom approach in my own developmental writing courses. Of particular interest to me was a 2015 article detailing a slight variation on the flipped classroom approach. In it, the report's author, Pangyen Weng, a developmental mathematics professor at Metropolitan State University in Minneapolis, Minnesota, discussed a course in which he provided all direct instruction via digital video and all assignments via the institution's learning management system, as is common in flipped classroom scenarios; but he also allowed students to finish at their own

pace. The relatively minor addition of allowing students to finish all required course assignments as quickly as they wished, Weng found, significantly increased course passing rates in the experimental group from 50% in the comparison to 77% in the experimental group (Weng, 2015). These promising results led me to embark on my own experiment in implementing a self-paced approach in combination with flipped teaching.

After reviewing Weng's (2015) promising findings, I set out to test the viability of implementing an instructional model   that largely replicated the approach used by Weng, one that merged flipped learning and self-paced instruction in a traditional face-to-face class, but that tested this method in one of my own developmental writing classrooms, whereas Weng tested the method in his developmental mathematics classroom. I chose to test the viability of such a teaching approach in the developmental writing classes I had been teaching for a number of years.

Prior to beginning my own research study, I set out to locate other studies that tested the use of instructional models blending flipped learning and self-paced instruction. Other than Weng's (2015) study on courses that implemented flipped learning in a self-paced format, I was unable to locate other similar studies. For good measure, I enlisted the assistance of a senior research librarian at Florida State University who similarly turned up very little, other than a 2003 study comparing self-paced courses that utilized some technology in more traditional, lecture-based courses (Ironsmith, Marva, Harju, & Eppler, 2003). Based on an extensive review of the literature, I feel confident in concluding that the combination of flipped learning with self-paced instruction is indeed a new instructional innovation, and one that may very well show great promise.

Methods

Experimental Course Design

In order to test the effectiveness of what I have come to term the self-paced face-to-face approach for my own discipline, student population, and local situation, I chose to initiate an action research study. Although

the validity of action research has repeatedly been questioned (David, 2000; Sommer, 2001), it holds an undeniable utility for practitioners exploring new and promising ideas that have not yet been rigorously investigated and tested. Action research can also provide additional context about the local situation, as the researcher is embedded within the institution and the classroom environment that is the subject of the study.

The overarching goal of this action research study was to measure the impact of allowing students enrolled in a traditional, face-to-face developmental writing course to complete all of the course requirements at their own pace. The approach employed during the semester under discussion here is representative of a larger body of research and practice aimed at implementing and measuring the effectiveness of classroom practices that promote flexibility and student autonomy, particularly in situations in which the student population is at high risk of dropping out, with studies affirming positive effects following the implementation of such practices (Blake, MacArthur, Mrkich, Philippakos, & Sancak-Marusa, 2017; MacArthur, Philippakos & Ianetta, 2015; MacArthur & Philippakos, 2013). These studies test approaches that promote student autonomy by means of instructing students in managing effort as opposed to simply emphasizing writing strategies. In effect, the teaching method tested in the study under discussion here provided students with greater autonomy over their in-class time, with student-teacher interactions emphasizing instruction in time management strategies, resulting ultimately in a higher incidence of student success.

In setting up the experimental conditions, all course assignments were made available at the start of the semester, and students could begin completing them immediately. Although students were permitted to work as quickly as they wished, students were still required to meet deadlines, although these deadlines were generally imposed on a weekly basis, and students were given slightly more time than is the norm in traditional courses meeting face-to-face. Based on my prior experience as a practitioner and on results observed by other

practitioners who have implemented flipped and self-paced approaches (de Grazia, Falconer, Nicodemus, & Medlin, 2012; Weng, 2015), I regarded the imposition of deadlines as central to the successful implementation of this approach.

An integral part of the course, drawing on the flipped learning approach, was a series of digital videos, which I produced based upon my experience of students' demonstrated needs within the local context. These videos were integrated into the course materials, and they provided the primary means of instruction. The design of these videos was informed by multimedia learning theory, and in particular Paas and Sweller's (2014) cognitive load theory, which posits that when technology mediates instruction, the functioning of the technology should not detract from the learner's attention to the target of the instruction. As such, the videos displayed only simple text and contained only a limited number of images.

The college's learning management system, Instructure's Canvas, was used to design a series of instructional modules designed around course topics. Each module focused on a particular topic and contained a brief instructional video, approximately five minutes in length, a study guide summarizing the topic in one-to-two pages, a self-graded assignment to provide immediate feedback, and a writing assignment submitted through the learning management system. Content for all of these materials was drawn from open educational resources made available under Creative Commons licensing guidelines.

Throughout the semester, attendance was required, and students received a grade based on attendance. Much of the class time was devoted to providing students time to work through the instructional modules, although approximately 30% of the contact hours were devoted to direct instruction, whole-class collaborative activities, and group activities; all of these activities were devoted to the reinforcement of topics and concepts shown to pose particular challenges for students within the specific local setting.

TEACHING REPORTS Impact of self-paced face-to-face format
continued

Students were assessed primarily through two exams: a mid-term exam administered slightly beyond the midpoint in the semester and a final exam administered at the end of the semester. The mid-term exam included a great deal more content than the final exam and was scheduled later in the semester to provide students who fell behind a viable option for catching up and completing the course successfully. The mid-term exam included twenty multiple-choice items assessing the grammar content of the course and one of the essay genres typically studied during the first half of a traditional, face-to-face developmental writing course. The final exam required students to complete a single summary/response essay, a genre typically covered in the second half of developmental writing courses at TCC, and the essay genre students cover during the first third of the semester in most college composition courses at TCC. Together, the mid-term and final exams accounted for 50% of students' total course averages, ensuring students mastered the course content regardless of the amount of time they individually required to complete it.

Research Design

Remaining mindful of the perceived limitations of action research and questions regarding the validity of the results generated, I took steps to ensure the validity and reliability of the study's results. I chose to implement a self-paced, face-to-face format in two developmental writing classes that met during the Summer 2016 semester. I selected these two sections as my experimental group because I had taught during the same 6-week-long summer session in four prior years. All of these summer sessions, including the experimental group, were composed of students of similar demographic and academic backgrounds. The number of students in each section over the five-year period remained relatively constant, and the classes met at similar times, with one class meeting from 9:00 a.m. to 10:15 a.m. and the other meeting from 10:30 a.m. to 11:45 a.m. in all but one of the five sessions considered; during the one session that was an exception, the classes met from 10:30 a.m. to 11:45 a.m. and from 12:00 a.m. to 1:15 a.m., respectively. In

the five semesters that serve as the control group, little, if anything, about my teaching approach changed and, for the most part, the pass rates (defined as students earning final grade of A, B, or C, which would allow students to enroll in the next required course) remained consistent across those semesters, making them excellent subjects for comparison.

In order to test the effectiveness of a self-paced face-to-face approach to teaching a developmental writing course, I employed a mixed methods approach, adhering to accepted guidelines for empirical research to the extent possible in a practitioner research scenario. In keeping with accepted methods for qualitative research, I triangulated data (Creswell, 2013), drawing on student success data for a quantitative view of the results (i.e. pass rates), a survey administered to students and, in a departure from traditional research methods, a collection of student profiles – an illustrative set of descriptions of selected student experiences, as gathered by the practitioner researcher. These student profiles are offered in order to provide a glimpse of those students who did not succeed under the treatment condition, as well as descriptions of students who struggled but ultimately did succeed in spite of significant obstacles, connecting these students' experiences to documented risk factors associated with student attrition and attempting to understand what impact the teaching approach under discussion here might have had on students' experiences and their likelihood of success.

Following the conclusion of the semester in which the experimental treatment was implemented, final student rosters for course sections included in both the experimental and control groups were gathered from the college's electronic student records storage and retrieval system. Pass rates were calculated using a manual process, tabulating the percentage of students earning grades of A, B, or C, as well as the percentages earning grades of D or F and those who withdrew from the course prior to the conclusion of the semester. Pass rates for sections taught by other instructors during semesters that included both the experimental and the control conditions were also calculated as a further point of

comparison to measure the effectiveness of the experimental treatment.

As a second data point, I chose to administer a student survey to assess student dispositions toward this teaching methodology. Questions were based on a similar instrument created by Weng for his 2015 study, with additional questions modeled on those posed in the widely utilized Community College Survey of Student Engagement (CCSSE), produced by the University of Texas at Austin's Center for Community College Student Engagement. The CCSSE gauges, among other factors, the degree to which students demonstrate self-direction in their own learning, which the creators of the survey affirm is linked closely with student success and retention (Rose, et al, 2015; Settle, 2011; Swigert & Murrell, 2001), and which has relevance to the experimental treatment under discussion here. The questions for the survey used in this study were designed to measure students' perceptions of the course in three primary areas: preferences for the self-paced face-to-face format versus the more traditional, lecture-based face-to-face course; students' perceptions of the quality of their own learning in a self-paced face-to-face course versus that of a more traditional course; and students' assessment of the design of the course materials.

For a third data point, I took a decidedly unconventional approach. One of the most widely critiqued aspects of action research can also be seen as one of its unique advantages: the embeddedness of the teacher-researcher in the community under observation, which provides a vantage point that would not otherwise be available to a researcher. The teacher-researcher naturally acquires knowledge about the subjects of her or his research that otherwise might very well be unavailable to a disinterested party who is not part of the situation under examination. Over the course of a school term, teachers at any level gain a wealth of knowledge about their students, their lives, their challenges, and their triumphs, and this is especially true when active teaching methods are employed which put the teacher into close contact with her or his students. A dispassionate outsider is unlikely to gain such intimate knowledge about

the subjects of her or his research, even through the use of tools such as interviews and focus groups, as those subjects are unlikely to reveal personal information to someone with whom they have no relationship. Such information may be illuminating when included as part of the results of a study, and the teacher-researcher is in the best position to bring such information to bear in explaining observed phenomena within their own classrooms, such as the impact of an intervention like the one under discussion here.

These brief sketches of the details of individual students' personal and academic situations are intended to be representative of larger trends among community college students nationwide, documenting the impact of the treatment under discussion here on individual members of documented at-risk demographic groups. A multitude of studies have documented the myriad factors that contribute to the dismal graduation rates common throughout the community college sector, with fewer than 21% of students graduating within two years and only 57% ultimately graduating with an associate's degree within six years (Juszkiewicz, 2015). Horton (2015) documented individual and societal factors that frequently impact student completion. The student profiles included as part of the results of this study reflect students impacted by ten of the factors identified by Horton as having the potential to jeopardize student persistence and completion, including: homelessness/transiency, task values (the degree to which students see the importance or utility of their studies), lack of motivation, financial constraints/poverty, being older than classmates, family issues/parenting, academic unpreparedness, learning or physical disabilities, having a non-supportive home environment, and cultural/language barriers.

The student profiles presented as part of the results of this study are offered to suggest the potential impact of student-directed interventions such as a self-paced face-to-face course, which offers students a greater ability to control the time during which they complete course requirements while still maintaining the in-class support that studies examining class attendance confirm

is essential to student success and retention in the community college sector (Center for Community College Student Engagement, 2012).

In reporting on the details of individual students' personal and academic situations, those students will be referred to using pseudonyms. Profiles will be presented of selected students from the experimental group who both did and did not succeed in the course. While representing a radical departure from traditional research methods, I feel that the student profiles function as well as other possible data points to elucidate the experiences of the student research subjects and the factors that contributed to their success, or lack thereof, in a course that employed the treatment under discussion here, as well as those that closely resemble it.

Results

Student Success Data

Having taught the same course in the same semester and at roughly the same times to a group of demographically similar students, I was able to compare the results of the experimental treatment to a total of five reliably similar control groups. In comparison to semesters placed in the control group, in which a traditional lecture format was utilized, sections included in the experimental group, in which the self-paced face-to-face format was used, had a markedly higher pass rate, with an average pass rate of 67% in the control group and 92% in the experimental group. Table 1 summarizes the pass rates from both the experimental and the control groups.

Although increases were seen in each semester when I taught the course, the gains were modest, averaging 7.5% per semester between the 2011, 2012, and 2014 semesters. The Summer 2015 semester was regarded as an anomaly, having a significantly higher pass rate than the prior summer semesters, although all five courses were taught using a similar approach and similar assignments. The anomalous nature of the success rates seen in the Summer 2015 semester are further confirmed by examination of the success rates from sections of the same course taught by me in the semester prior to and the semester following the Summer 2015 semester, which are

similar to the success rates seen in the other semesters that were part of the control group. These success rates are summarized in Table 2.

As further confirmation of the positive impact resulting from implementation of the self-paced face-to-face format in the experimental group, departmental success rates, excluding the experimental group, for the same course taught during the same semester stood at only 51%; in the summer of 2015, departmental success rates stood at 73%. This finding suggests that the results seen in the experimental group were not attributable to an especially strong cohort of students during the semester in which the experimental treatment was implemented, nor was it the result of any institutional policy or shift in enrollment patterns that would have produced dramatically different success rates in comparison with prior semesters in which the same course was taught.

Student Surveys

Given suggestions in recent research that students prefer traditional, lecture-based instruction to flipped learning methods (Bishop & Verleger, 2013), in spite of the increased effectiveness of flipped approaches (Bhagat, Chang, & Chang, 2016; Schultz, Duffield, Rasmussen, & Wageman, 2014; Sharma, Lau, Doherty, & Harbutt, 2015), I anticipated similar findings in my own survey, and indeed at certain points during the semester, I sensed negative dispositions toward the course approach on the part of at least some students, though student reluctance is a common problem in developmental education classes generally. Surprisingly, students reflected overwhelmingly positive dispositions toward the self-paced face-to-face teaching methodology in their survey responses.

The student survey sought to document students' impressions of their experiences in the course in three main areas: their perceptions of their own learning over the course of the semester; their perceptions of the ease, usability and effectiveness of the course materials, including the instructional videos, self-graded assignments, and writing assignments; and their dispositions

toward a self-paced face-to-face course versus a traditional, lecture-based course. In total, the survey consisted of nine items with student responses recorded on a Likert-type scale. Student responses are summarized in Table 3.

A total of three questions regarding students' perceptions of their own learning were included in the survey. These included the items that asked students to gauge their perceptions of their learning in the self-paced face-to-face course versus courses taught in a more traditional format, students' levels of confidence in their ability to do well in their next English course, and students' perceptions of how much they learned. On the latter two questions, 100% of students agreed that they had learned a lot in the course and that they judged themselves well prepared for the next English course they were required to take. When asked to compare this course model with more traditional formats, however, about 10% of those surveyed were less certain, with one student neutral on the question and another disagreeing entirely. In spite of this, the overwhelming majority of students, 90.47%, agreed that they'd learned just as much in this course as they had in more traditional classes, and 62% indicated "strong agreement" with this statement.

Student Profiles

In all, four students out of a total of forty failed to earn passing averages in the course. Brief sketches are provided of three out of the four students who failed to succeed in the course, providing general information about each student's personal and academic characteristics that may have impacted their success. Profiles of an additional four at-risk students who did succeed are also provided. In both cases, the information regarding each student is connected with the larger student characteristics identified by Horton (2015) in order to gain a better understanding of how self-directed teaching approaches, such as the self-paced face-to-face approach, may or may not provide opportunities for at-risk student groups to succeed in greater numbers than they do when enrolled in courses that employ more conventional instructional strategies. The students profiled here were selected for

the degree to which they were judged to have represented the larger body of students exhibiting the characteristics that have been shown to negatively impact student success and completion.

Herman. One of the students who did not succeed in the course was a student who never showed up to class and never contacted me to explain his absence or make arrangements to continue in or withdraw from the class. I will refer to this student as Herman. In keeping with institutional policy, all students who enrolled in the course and remained on the roster after the drop/add period are included in the totals reported here. This number includes this one student who registered for the course but never attended. Institutional policy prohibits the student from being dropped from the course's master roster, and these students are included in the college's own success data. I made several unsuccessful attempts to contact this student, by phone and by email, but my messages were not returned. Herman remained on my roster until approximately the middle of the term. Institutional policy does allow faculty members to administratively withdraw students who consistently do not attend, so just prior to the mid-point in the semester, I administratively withdrew Herman from the course. This administrative action, however, did not remove the student's name from the course roster, and he remains as part of the success data reported here. Herman's failure to respond to repeated attempts to contact him can be regarded as representative of Horton's (2015) description of students who fail to succeed in college, particularly at community colleges, for reasons of a demonstrated inability or unwillingness to see a clear benefit or utility to be derived from a college education. Any instructional approach, no matter how sound, is unlikely to have much of an impact on such larger problems of perception facing higher education.

Ariele. Another student who failed to complete the course successfully I will refer to as Ariele. This student attended class and completed her assignments faithfully until the day on which financial aid was dispersed. Thereafter, she neither attended class again nor completed any assignments. Attempts to contact her were un-

Impact of self-paced face-to-face format
continued

successful. I later discovered that she also had an unsuccessful academic record at a prior institution, attending that institution for six semesters and successfully completing courses in only one of those semesters. When attempts to contact her failed, I administratively withdrew her from the course. Like Herman, Ariele exhibited an evident inability or unwillingness to see a tangible benefit or utility to be derived from the opportunity to earn a degree (Horton, 2015), and the treatment under discussion here failed to provide any inducement or benefit for a student likely possessing this manner of disposition.

Omar. One final student who did not succeed I will refer to as Omar. He had successfully completed one prior semester at TCC, but while he was part of the experimental group, he attended only sporadically. During the second week of the course, he spoke with me privately and disclosed that he had recently become homeless and as a result was having a difficult time attending class. After the third week of the semester, he did not return to class, and attempts to contact him were unsuccessful. Omar's experience, too, is illustrative of larger groups of students identified by Horton (2015) who find the constraints of homelessness or transiency to be an insurmountable barrier to completing college successfully. Unfortunately, this more flexible course format failed to offer Omar a path to success amid the chaos that characterized his life at the time he was enrolled in the course.

Leyla. One student who did succeed in the course against significant odds was a thirty-six-year-old non-traditional student who I will refer to as Leyla. Early in the semester, Leyla pulled me aside and disclosed to me that she and her young children had recently become homeless and that the unpredictability of her situation was impacting her ability to attend class on a regular basis. She lacked access to childcare or a strong family support network that could have assisted with childcare and temporary housing. In spite of all this, Leyla was a strong writer, and when she was able to attend class, she worked hard. She exhibited what I would regard as an earnest desire to succeed in the class. In prior semesters, past experience has shown, it is unlikely that Leyla would have succeeded without attending class on a

regular basis. She would have missed the lectures and scheduled assessments, and she would have fallen too far behind to catch up. The provision of instructional videos and self-paced assignments, however, allowed Leyla to work through the course materials whenever she was able. She completed the course with a grade of B, finishing all course requirements and completing the final exam two days early. Leyla's situation exhibited multiple risk factors identified by Horton (2015), including homelessness/transiency, financial constraints/poverty, family issues/parenting, and being an older student. In spite of all of these risk factors, Leyla managed to not only succeed but to do quite well in the course. This one student's experience is suggestive of the promise of this more flexible course delivery model which, like a fully online or hybrid course, offers students the flexibility to complete assignments at times that are convenient for them, in spite of personal difficulties or limitations, while also providing the in-class support that is necessary for many students to succeed and do well.

Lin. Another student who succeeded in the course in spite of significant difficulties I will refer to as Lin. Lin had worked for a number of years in the local school district as a paraprofessional, but following a district rule change requiring paraprofessionals to have at least an associate's degree, she was required to leave her position as she lacked the required credential. She came to TCC to continue her education, seeking an associate of science degree in early childhood education. Having been out of school for a number of years, she exhibited acute academic weaknesses and signs of long-term memory deficits. Her placement test scores placed her in the lower of two levels of all three developmental education course sequences at TCC: writing, reading, and mathematics. In spite of her many academic challenges and weaknesses, she exhibited a high degree of motivation. She enrolled in the 9:00 a.m. class but often stayed through the 10:30 a.m. class to continue working, quietly continuing her work on days when that class was engaged in whole-class and small group activities and logging a total of three consecutive hours of dedicated in-class work daily. Lin opted not to work ahead on her assignments, seeking the maximum amount of time

possible to complete the assignments. Lin likely benefitted from adjustments in the schedule of the self-paced course that allowed for a slightly longer duration of time between deadlines as she worked slowly and required a great deal of individualized attention, frequently forgetting aspects of the assignments she was working on. In spite of all this, she completed all of the course requirements, including the final exam, on the final day of the course, ultimately earning a grade of B. Like Leyla, Lin, exhibited multiple risk factors identified by Horton (2015) that could well have posed a threat to her ability to succeed. She was an older student, was academically unprepared at the time of enrollment, and exhibited evidence of undiagnosed learning disabilities or other cognitive impairments. In spite of all of these obstacles, Lin managed to succeed and do well in the course by taking advantage of the more flexible format and environment offered by this delivery model.

Maya. A third student who may well have been at risk of failing the same course taught using more traditional methods was a student who I will refer to as Maya, an eighteen-year-old recent high school graduate. Maya's placement test scores were exceptionally high, very nearly allowing her to enroll directly into college-level English. Early in the semester, she was observed to be a strong student, but as the semester progressed, she began missing assignment deadlines. I asked to speak with her privately about her failure to complete assignments and the impact these missed deadlines were likely to have on her success in the class. She then disclosed to me that her mother had recently lost her job and was suffering a health crisis as a result. I did my best to counsel and encourage the student, as I always do in such situations, and I made sure that she was aware of campus mental health services. I also pointed out to her the provisions in the syllabus that allow for late submission of certain assignments, policies that remained unchanged between the control and experimental semesters, and I noted that the instructional videos allowed her to acquire the content knowledge she needed where and when she was able. Ultimately, she submitted the missed assignments, mastered the content of the course, and ended the semester with a grade of A. Although this student

may well have succeeded in a course that utilized a more traditional format, I have observed students in similar situations falling behind when they were unable to focus on the lectures and either terminating their enrollment in the class out of frustration or performing poorly on the assignments and assessments. With the provision of the self-paced option, this student was able to catch up on her work and not only end the semester successfully but to perform superlatively, in line with her true level of ability and motivation to succeed. Maya exhibited the risk factor of financial constraints/poverty identified by Horton (2015), but with the flexibility offered by this alternative course delivery model, she too was able to succeed and ultimately do very well in the course.

Hamad. A student who very likely would not have succeeded, judging once again from past experience, in a class that utilized more traditional methods was an international student who I'll call Hamad. Hamad had a very low level of English language proficiency at the time of the class under discussion here. Like other smaller and mid-sized community colleges that are geographically isolated from major metropolitan centers, TCC admits a small number of international students who are non-native speakers of English. The college requires students to demonstrate minimal English language proficiency through submission of scores from the TOEFL or the IELTS, common standardized measurements used by institutions throughout the world as proof of English language proficiency, but in spite of this requirement students often struggle to meet the language demands of their college courses. Once enrolled, it is expected that students are able to function at a level of language proficiency sufficient to meet the demands of their college-level coursework, and English as a second language classes are generally not offered, though the college has attempted to offer such classes sporadically in the past, often cancelling them before the start of the semester due to low enrollment. International students are also required by state law to complete the placement test and any developmental education requirements that are assigned based on those scores. Hamad's placement test scores were very low, and he was assigned to the lower of two levels of developmental education in all areas.

Hamad had completed very little English as a second language coursework in his home country, and, consequently, he struggled not only with writing, the topic of the course under discussion here, but also with listening and reading comprehension and with making himself understood when speaking in English. Hamad required a great deal of individualized attention, and the format of the course under discussion here allowed me to offer that attention to him. He shared at one point in the semester that he enjoyed the format of the course and felt it was superior to the lecture- and discussion-based English as a foreign language courses he'd completed in his home country, suggesting that this teaching method might hold promise for English as a second language courses, as well. His writing improved markedly over the course of the semester, and his progress was sufficient to allow him to earn a final grade of C. Hamad exhibited the single risk factor of cultural/language barriers (Horton, 2015), but it is a significant one, encompassing any number of social and linguistic challenges that are well-known and easily understood. In spite of these, Hamad managed to do relatively well in the course and exhibited a positive affect regarding the approach under discussion here.

Reflections and Considerations

Among the many criticisms of action research is the difficulty in drawing any certain conclusions that are widely transferrable to other contexts. Research that is embedded in a specific classroom environment taking in such a small sample size cannot produce results that can be easily replicated from one environment to the next. Therefore, I will avoid offering any certain conclusions based on my experience and the limited data presented here. Instead, I will simply offer my own reflections on how successful this set of instructional practices was in accomplishing the intended goal, along with some considerations, based on my experience, that other practitioners may want to take into account when attempting a similar curricular modification.

The first, and perhaps most obvious, consideration a practitioner may want to take into account before attempting a similar experiment is that challenges related to classroom management may inevitably arise out of the implementation of this type of teaching methodology. Although deadlines were imposed on all of the assignments, such that students faced almost daily deadlines, many students successfully met those deadlines far earlier than required and were left with long stretches of unstructured time. The amount of unstructured time became significant for some students as they worked ahead and submitted assignments early, in many cases producing exemplary work that earned high scores. The introduction of these large stretches of unstructured time resulted in many of the younger and less mature students finding myriad ways to fill this time, talking to one another, watching streaming videos, and searching social media. Managing students who had worked ahead, per my instructions, and essentially recaptured some of their class time, was a constant challenge, and it was necessary to continually remind students who had been able to work ahead that some of their peers had not been able to do so and needed a relatively distraction-free environment in which to work. These remarks also had the unintended consequence of calling attention to students who were working more slowly, possibly even suggesting the presence of learning disabilities or other academic weaknesses in those students. In the future, I intend to tie part of students' attendance grade to producing a consistent volume of work each day students attend class. I did not do so when this challenge arose during the experimental semester as I would have risked changing an essential part of the course design, thus potentially impacting the results of the study under discussion here.

As the semester progressed, one undeniably positive outcome I observed was that I began to feel I'd developed a closer connection and better overall rapport with my students in comparison to other semesters. My interactions with students during the experimental semester were more individualized and more personal. Having time during each class meeting to speak with students individually allowed me to learn more about my students and to develop more personal connections with them. These brief daily interactions with students led them, I believe, to come to me in greater numbers

when they experienced difficulties with the course work or difficulties in their personal lives that were preventing them from completing their coursework. By the third week of the semester, I noticed a significant uptick in the number of one-on-one conversations I was having with students regarding matters of personal and academic difficulties. These interactions allowed me to advise students on how they could best meet the requirements of the course within the parameters set out in the syllabus. In my experience, these sorts of discussions are significantly less likely to occur in classes in which a lecture is central to the day-to-day activities of the course. I would speculate that this enhanced rapport with students contributed as much as any other factor to students' greater overall success in completing the course.

As might be expected, one of the most significant benefits of this instructional approach to teaching turned out to be the increased flexibility regarding completion of assignments and other course requirements. Students who were unable or unwilling to attend class were able to receive high quality instruction when and where they chose, and they were also able to submit assignments through the learning management system any time before the deadline. Surprisingly, compliance with the course attendance policy remained relatively unchanged while success rates increased. Contrary to some of my apprehensions, students did not simply take advantage of the added flexibility, using it as an excuse to skip class and complete assignments close to the deadline. It simply gave non-attending students an opportunity to complete the course work without attending class on a regular basis. One might surmise that this type of teaching approach might serve as a useful alternative to fully online courses, which result in almost universally lower rates of completion compared to traditional, face-to-face courses (Oblender, 2002). In the self-paced face-to-face model, students register for a class that meets at a time when they are generally free to attend class, but if they are unable to attend at times, or if they find they're able to complete the course requirements without the assistance of the instructor, students may choose not to attend the scheduled class and may instead complete the course as they are able,

without much of a penalty to their overall average in the course. Students have face-to-face assistance if they need it, but they are not required to utilize it if they do not wish to do so.

One of the greatest benefits of this instructional approach was the ability to work individually with my weakest students, which was a direct result of the increase in unstructured time in the classroom. Indeed, by the last two days of class, only my two weakest students had yet to complete the final exam, and during these remaining two days I was able to devote my full attention to these two students, filling in gaps in their knowledge and providing final exam reviews tailored to their individual needs, doing everything possible to ensure their success. I believe that this added time to work with the students having the greatest need was a crucial component in producing the positive results I saw during the experimental semester.

Final Thoughts

As greater pressures are placed on institutions of higher education to at once cut costs, reduce time to completion, and increase graduation rates, placing particular pressure on critical but costly and time-consuming areas such as developmental education, practitioners will have no choice but to examine alternative instructional models that go beyond the mere addition of "active learning" strategies, which merely change day-to-day processes that occur within the traditional classroom environment. Instead, it is necessary to examine the ways in which we might restructure the instructional experience at a macro level, breaking down barriers that confine students and instructors within pre-determined spaces of time, such as class sessions and semesters. Technology has enabled much greater flexibility to design educational experiences that give students much greater control over their time-to-completion and that can incentivize their completion. An instructional approach such as the self-paced face-to-face course is just one small step, I believe, toward a much larger shift in how higher education is delivered.

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Impact of self-paced face-to-face format
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The natural evolution that is likely to occur in time as a result of more and more sophisticated instructional technologies is toward a student experience that is far less linear, with greater flexibility in how and where students receive instruction and complete course requirements. It seems clear, however, that fully online education will not be the panacea that has been promised by its adherents, based on the results it has shown thus far. Instead, higher education will most probably undergo a transformation that brings together more flexible physical spaces, staffed by competent professionals, including full professors, who provide just-in-time support while also providing a rich online experience that delivers high-quality instruction to support learning experiences that effectively promote learning. The result will likely be less a technological revolution that upends traditional institutions of higher education and more a gradual series of modest reforms and improvements that, together, will add up to an environment that looks markedly different than, though not altogether unfamiliar to, the higher education landscape of today.

My experiment in creating a self-paced face-to-face course did not make it possible for me to teach hundreds of students across six continents, one of the revolutionary promises that emerged from some corners of the world of online learning and subsequently failed. It did not allow my institution to shrewdly horde resources saved through some new technological innovation that allowed for a decreased demand for "human capital." It simply reallocated existing resources of space, time, and talent, and the monetary resources that come along with all of that, using them to do our work better, for the benefit of our students.

My experience experimenting with this new instructional model has shown me that technology is not going to end higher education as we know it, casting it onto the scrapheap of history, consigning college professors to the fate of the blacksmith and the switchboard operator. It is simply going to allow us to do our work more effectively, to better meet the needs of our students, and to meet the demands of policymakers who place ever greater demands on our institutions while manifesting an ever declining willingness to fund their mandates. In the end, however, the goals of the technological revolutionists, the legislative bureaucrats, and those of us who strive day-to-day in institutions of higher education—the oft-forgotten college faculty and students—will all be met by the inevitable impact of this profusion of new and ever-improving technological instructional innovations.

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Table 1
Pass Rates of Experimental and Control Groups

	2011	2012	2014	2015	2016
Overall ABC	53%	60%	68%	87%	92%
Overall DF	43%	21%	12%	13%	2%
Withdrawal	4%	19%	20%	0%	6%

Table 2
Pass Rates in Semesters Immediately Prior to Summer 2016

	Spring 2015	Summer 2015	Fall 2015	Spring 2016
Overall ABC	73%	87%	72%	60%

Table 3
Student Survey Responses

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I learned just as much in this course as I have in more traditional classes.					
	61.90%	28.57%	4.76%	4.76%	0.00%
	13	6	1	1	
I have learned a lot in this class.					
	71.43%	28.57%	0.00%	0.00	0.00%
	15	6	0	0	0
I feel confident about my ability to be successful in my next English class.					
	71.43%	28.57%	0.00%	0.00%	0.00%
	15	6	0	0	0
I prefer the self-paced face-to-face format to the traditional format.					
	61.90%	33.33%	4.76%	0.00%	0.00%
	13	7	1	0	0
I preferred getting explanations about the course material through the videos posted in Canvas.					
	28.57%	28.57%	42.86%	0.00%	0.00%
	6	6	9	0	0
The resources and assignments provided through Canvas were effective in teaching me what I needed to know to be successful in this class.					
	71.43%	19.05%	9.52%	0.00%	0.00%
	15	4	2	0	0
I would register for another self-paced face-to-face course in the future.					
	71.43%	23.81%	4.76%	0.00%	0.00%
	15	5	1	0	0
I would recommend this class to others.					
	80.95%	19.05%	0.00%	0.00%	0.00%
	17	4	0	0	0

n=21

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Moving beyond opinion and assumption: An information literacy activity to foster students' critical thinking about popular press

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Abstract

Students' ability to navigate the current information environment is challenged in part by their tendency to oversimplify information evaluation. Thinking critically about the content and context of information, a key aspect of information literacy, can help moderate this challenge. The activity described in this paper guided Introductory Psychology students in their development of information literacy skills by evaluating claims made in popular press articles. The activity, grounded in a constructivist approach, asked students to examine the authority of the articles, the authors' perspectives, and their use of evidence. We observed students' movement from concrete summarization of the sources to metacognitive thinking. This assignment can be adapted for other disciplines. Increasing students' ability to evaluate and reflect on popular press claims that they continuously encounter will contribute to their information literacy development as critical thinkers and overall consumers of information.

Keywords

information literacy, critical thinking, active learning

Introduction

John Oliver, host of the HBO television series Last Week Tonight, recently aired a popular episode relating to the media's coverage of science research. The episode highlighted how the complexities of scientific findings can be misinterpreted and glossed over by quick and easily digestible headlines (Last Week Tonight, 2016). Some of these humorous but real titles included: "Midnight memories: Late night snacks bad for brain;" "A glass of red wine is just as good as one hour at the gym;" and "Scientists say smelling farts might cure cancer." Students currently entering college are inundated with "research" information, especially through social media sources such as Facebook and Twitter, which they access readily and regularly on their mobile devices (Statistica, 2016). Given students' easy access to information and the frequent misrepresentation of research in popular media (Yavchitz et al., 2012), the focus of this paper is the presentation of an information literacy assignment created to foster students' ability to evaluate evidence used in popular press claims.

The information literacy assignment discussed in this paper is grounded in a constructivist approach, attempting to build on students' pre-existing knowledge and usage of popular media and help them in their development of critical and reflective thinking. It takes a novel approach to information literacy by allowing students the opportunity to interrogate popular media sources about course-related concepts and construct more abstract and transferrable information literacy skills, thinking about their meaning, context, and evaluation. This activity was designed collaboratively by a psychology faculty member and a librarian. It was developed for and implemented in an introductory psychology course, yet could be adapted for courses in other disciplines as evaluating sources is a core information literacy skill.

Information Literacy Framework

Information literacy has been defined by the Association of College and Research Libraries (2016) as the "set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning" (p. 3). The Association's Framework for Information Literacy for Higher Education names six concepts central to information literacy learning: Authority Is Constructed and Contextual, Information Creation as a Process, Information Has Value, Research as Inquiry, Scholarship as Conversation, and Searching as Strategic Exploration.

Information literacy education has often placed significant emphasis on students' searching behaviors, or what the Framework calls "Searching as Strategic Exploration." Yet evaluating sources is just as important to students' overall information literacy development as it helps them navigate and select information sources (Stanovich, 2007). Faculty often diligently guide students in an understanding of sources that can be deemed "good" or "bad" (Larkin & Pines, 2005). By reinforcing a perception of sources as good versus bad, though, students might be oversimplifying and missing critical information that could push their understanding and arguments

further. We contend that it is crucial for educators to also focus on evaluating the content and context of information to improve students' critical thinking abilities and overall information literacy skills.

The assignment discussed here focuses on information evaluation and is informed by the concept described in the Framework as "Authority is Constructed and Contextual" (Association of College and Research Libraries, 2016). This concept details that the authority of an information source depends in part on the expertise and credibility of its creator, yet the source's and creator's authority is not unconditional or absolute. Instead, the community or system in which the information has been created or will be used, as well as the individual's need for selecting the information, has a significant impact on how its influence is determined. By highlighting the constructed and contextual nature of a source's authority, the Framework illustrates the importance of developing students' capacities to think critically about a source's "origins, context, and suitability for the current information need" (p. 4), rather than categorize a source as simply good or bad. Students' ability to understand and practice this concept is important to their examination of all information, from empirical research and theoretical writing to short blog posts and television science segments, and contributes to a more nuanced approach to information evaluation.

The "Authority is Constructed and Contextual" concept, and the Framework overall, emphasize the importance of metacognition and reflection to information literacy. Inherent to students' development of information evaluation skills and attitudes, for example, is "an open mind when encountering varied and sometimes conflicting perspectives" as well as an "awareness of the importance of assessing content with a skeptical stance and with a self-awareness of their own biases and worldview" (Association of College and Research Libraries, 2016, p. 4). Information evaluation skills require students, then, to engage not only with the content of sources, but also to critically reflect on how and why they engage with those sources.

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Research in the Popular Press

There is an increasingly accessible amount of information available and students often perceive their information literacy skills as more developed than they are (Birkett & Hughes, 2013; Gross & Latham, 2012; Head & Eisenberg, 2010). Students' access to information and the presentation of "research" through social media can lead them to believe they can tackle challenging academic literature before they are prepared to do so. Having students start the process of evaluation with more accessible and comfortable literature, such as popular press, can help them develop foundational skills that benefit their progressive development and eventual deeper understanding of more complex information. Moreover, if students are likely to come into daily contact with research information via media sources presented to them in catchy headlines or 140 characters, it is important for their information literacy to teach them how to assess this content, know how and where the authors are coming from, and form independent and thoughtful evaluation of their claims.

According to Allen (2008), critical thinking, a component of information literacy, "involves the conceptualization, analysis, synthesis, evaluation, and ultimate application of information so that the learner may reach conclusions or form independent judgments based upon what the learner has experienced combined with previous knowledge" (p. 21). Considering this definition of critical thinking, it is also then important to teach students how to analyze and consider the validity and usefulness of popular press. This focus on complexity in the popular press literature aids their critical thinking about all information by helping students become more deliberate and process-oriented in their search for sources, as well as more flexible about selection of their source choices (Halpern & Butler, 2011).

Information Literacy in Higher Education

Information literacy is foundational to the general education curriculum and critical to both academic and lifelong learning (Wiebe, 2016). The Middle State Commission for Higher Education (2014) requires that, in order to receive accreditation, institutions design curricula "so that students acquire and demonstrate essential skills including … information literacy" (p. 8). Information literacy promotes citizenship, educated global understanding and interaction (Cranney & Dunn, 2011), goal areas often articulated in institutional mission statements and general education curricula.

Information literacy has also been a particularly distinct focus in recent years as a vital aspect of many majors, including psychology (Cranney, Morris, Spehar, & Scoufis, 2008; American Psychological Association, 2013). Within the APA (2013) guidelines for the undergraduate psychology major, there are several places where information literacy takes a prominent role. Information literacy is specifically crucial to accruing a strong knowledge of basic psychology and in turn knowing how to apply that basic knowledge (goal 1). Additionally, the second goal of the APA guidelines highlights that all psychology undergraduates should be psychologically literate and know how to use integrative thinking and problem solving, essential critical thinking skills. With the massive amount of information in psychology—historical research, current research, and the presentation (or at times misrepresentation) of this research in multiple popular press mediums—it is imperative that students of psychology know how to be insightful about this information as well as reflective of its context and construction (Birkett & Hughes, 2013; Dunn, 2009).

Given the importance of information literacy to general education and its strong grounding in psychology guidelines, the inclusion of information literacy in introductory psychology courses can prepare all students, psychology majors or not, for their future success in undergraduate education and beyond. The relevance of information evaluation skills, as a key aspect of information literacy, to other disciplines allows for the integration of similar assignments in foundational courses. Moreover, employers recently have noted that information literacy is highly valued but that they seek clearer evidence of students' skills in this area (Raish & Rimland, 2016). Both faculty and students also agree

that critical thinking, teamwork, and problem solving are key employability skills (Gross & Latham, 2012; Head, Van Hoeck, Eschler, & Fullerton, 2013). Educators should give thought to information literacy skills as employers continue to complain that new graduates must be able to transfer and apply what they have learned to new problems (Jackson & Chapman, 2012; Tymon, 2011). The literature suggests that faculty need to embrace more innovative teaching methods in order to help students develop these skills that contribute to their overall education and employability (Bruce, 2000; Griffin & Annulis, 2013).

Information Literacy Assignment

One innovative teaching method that has been particularly successful with increasing the integration of information literacy into the undergraduate curriculum, and therefore implemented in the current assignment, is collaboration between faculty and librarians (Hine, Gollin, Ozols, Hill, & Scoufis, 2002; Iannuzzi, Mangrum, & Strichart, 1999; Wiebe, 2016). Collaboration between educators can support students' learning from various perspectives, help them learn how to better navigate sources, and also improve their confidence in their ability to evaluate and choose sources (Larkin & Pines, 2005; Starfield, Trahn, & Scoufis 2004).

Collaborative teaching has grounding in constructivist theory which has gained more popularity in education as pedagogies have moved to more student-centered assignments that are focused on active learning (Allen, 2008; Detlor, Booker, Serenko, & Julien, 2012). Constructivist theory works from the foundation that it is important to build knowledge from students' already existing understanding, or schemas, of the world (Allen, 2008). Assignments constructed and implemented by faculty and librarians reflect their own different disciplinary perspectives and generate more opportunities for students to use their existing schemas of popular press and become more "critical consumers of applied research" (Cranney et al., 2011, p. 152).

The activity discussed in this paper was created by a psychology faculty member and a social science librarian

with the goal to increase students' information literacy skills, particularly their ability to think critically about the authority of information sources and to reflect on their evaluation habits and approaches. We provided students with information at the popular media level and asked students to evaluate above and beyond their own opinions and prior scientific assumptions, particularly guiding them to focus on the context and authority of the material. The activity was implemented at the introductory level to lay the foundation for information literacy success and development in students' academic careers (Burton & McDonald, 2011).

By assigning students to read articles that were readily accessible, and similar to articles that they are likely to access on a daily basis, we could use constructivist pedagogy to support their active involvement in the conversation about science research and their learning. First year students, who made up the majority of the classes involved, have been found to prefer group interaction and the feel of a small class (Feigenbaum & Friend, 1992) so the activity used a jigsaw pedagogical approach as a means for students to grapple with issues of information literacy (and psychological literacy) in collaboration with their peers, a challenging task to complete in larger classes. This information literacy activity also reflects the Association of College and Research Libraries' (2016) and Halpern and Butler's (2011) calls for the importance of transferring knowledge and concepts as well as improving metacognitive knowledge. Our overall objective was to have students move from concrete summarization of popular press readings to abstract and metacognitive thinking about why and how to evaluate information sources.

Activity Implementation and Observations

The information literacy activity was conducted in undergraduate introductory psychology classes in the fall of 2015 (40 students) and the spring of 2016 (35 students). Students enrolled included 46 women and 29 men. Seventy percent of the students were freshmen, 19% were sophomores, and 11% were juniors and seniors. This project was determined to be exempt from

IRB review as data were collected only at the generalized group level, rather than the individual student level.

In the class session prior to this activity, the faculty instructor randomly divided students into four groups and assigned members of each group one popular press article to read as homework. The magazine and newspaper articles related to psychological topics: sleep habits (Pullman, 2015), mental health connections to gun violence (Lopez, 2015), social anxiety (Meyer, 2015), and the importance of early reading to children (Klass, 2015).

We made these selections collaboratively based on the articles' informal and accessible style, as well as their connection to course content. We used the following outline as our guide to in-class activities in the next class session. We collaboratively designed the phases of the activity described here to advance students' abilities to think critically about the content and context of sources, working toward a more nuanced sense of information evaluation and an understanding of authority as constructed and contextual.

Part One (Jigsaw A)

In part one of the activity (Jigsaw A), we asked students to discuss the content of the article they had read with other students who also read the same article. These four groups included nine to ten students each. Students spent approximately fifteen minutes discussing their assigned articles. In this phase, our goal was for students to articulate and reflect on their understanding of the content of the articles with their classmates. They could also bolster and diversify their understanding by hearing how other students approached the article. We gave students the following questions to help focus their discussions and asked them to take personal notes to have information to share in the next step.

• What was the article about? What did you get out of it?

• How did you react to the article? Why? What do you think of its claims? How did you get to that opinion?

• What more would you want to know?

We circulated to listen in on students' conversations, help them stay on track, and remind them that they would each be responsible for reporting on the article and group discussion to other classmates who had not read the article in the next step of the activity. Generally, students effectively summarized the main points of their articles and discussed their reactions and opinions about the articles' claims. There were some students who were able to relate the content of the articles to their existing knowledge and previously held beliefs, as well as personal experiences. A few students went a step further and discussed the authors' backgrounds and intentions. When the discussions came to a close, we asked students to count off into new, smaller groups.

Part Two (Jigsaw B)

Students moved to their new groups. Each of these approximately ten groups included four students with each student poised to serve as the "expert" on their assigned articles. In approximately twenty minutes, students summarized their respective articles and group discussions from part one and then started to discuss similarities and differences between articles. In this phase, our goal was for students to begin thinking more abstractly and metacognitively about how they read and evaluated their articles. We wanted students to begin to articulate questions and considerations key to critically reflecting on and evaluating sources. We gave students the following questions to help guide their discussion of similarities and differences between their articles in an effort to build toward more abstract and metacognitive discussions across articles:

• Where is there overlap in the key ideas of the articles and the questions you asked about them?

• Where is there difference in the key ideas of the articles and the questions you asked about them?

• What advice would you give students about how to evaluate any article?

We divided the chalkboard into three areas: overlap, difference, and advice. We asked each group of

students to contribute at least two ideas for each area on the board by the end of this phase of the activity. The final question about giving other students advice, in particular, required students to think metacognitively about how they approached and evaluated the articles and served to help students frame abstract, yet actionable, recommendations they could carry with them beyond the activity.

Four themes emerged after analysis of the groups' reports regarding overlaps and differences: the subject matter of the articles; articles' use of evidence and statistics; purpose and tone of the articles; and bias in the articles. Table 1 highlights a comparison of student responses to each of these prompts (Insert Table 1 here). When responding to the prompt about giving advice, analysis of students' recommendations suggested five themes: fostering an attitude of skepticism; caution against generalizations; attention to source reliability and reputation; awareness of audience; and confirming credibility through evidence. Table 2 includes a selection of student responses raised most frequently (Insert Table 2 here).

Part Three

In the final phase of the activity, we reconvened as an entire class to debrief and reflect on students' smaller group discussions. The ideas that each group noted on the board were useful as a jumping off point for our discussion. Our goal in this phase was to give students an opportunity to hear what other groups had discussed, correct any misconceptions, and deepen students' critical analysis of sources. We used the following questions to guide our discussion:

• What themes do you notice across the groups' contributions on the board?

• What themes are conflicting?

• What themes are missing?

• What did you get out of this process?

• How did this activity help you identify strategies for your future reading and analysis in other classes and in your life generally?

Students were able to recognize that many groups had contributed similar questions and areas of overlap and difference and also become aware of key points that other groups raised but did not surface in their own small groups.

Discussion

The popular press is full of conflicting information and misrepresentations (Last Week Tonight, 2016; Yavchitz et al., 2012). Information literacy skills help students navigate this vast amount of information, from popular press articles to scholarly research. Thinking critically about the content, authority, and context of information sources allows students to consider sources' relative strengths and weaknesses on a spectrum, rather than simply label sources as good versus bad (Association of College and Research Libraries, 2016; American Psychological Association, 2013). Information literacy skills help prepare students for success in the classroom and beyond (Burton & McDonald, 2011; Head, Van Hoeck, Eschler, & Fullerton, 2013; Raish & Rimland, 2016).

This activity was designed to help students develop information literacy at the introductory level alongside literacy in the course content areas. Active learning experiences, grounded in constructivist theory, have been shown to improve students' information literacy learning outcomes (Detlor, Booker, Serenko, & Julien, 2012). This active learning jigsaw activity included three phases intended to facilitate students' progression from concrete summarization of sources (part one) to more critical and abstract thinking about source evaluation (parts two and three). The combination of small group work and large group discussion in this activity helped students construct their understanding collaboratively. The guiding questions throughout the activity focused students' consideration of "authority as constructed and contextual" as well as their metacognitive skills (Association of College and Research Libraries, 2016).

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Evidence of Student Learning through Formative Assessment

In many information literacy assignments, instructors can see the outcomes of students' source evaluations from only the sources they select; instructors typically have less access to the thought processes that led students to select their sources. Because this activity focused on evaluation of provided popular press selections, and asked students to articulate rationales for their evaluations, it helped uncover students' thinking and assumptions—for themselves and for us as instructors—that might otherwise have remained hidden. Not only did this make students' thinking more transparent and therefore available for discussion, but it also raised their own metacognitive awareness of the evaluation process, a crucial mindset for students' information literacy development (Association of College and Research Libraries, 2016; Halpern & Butler, 2011).

With a formative assessment, or informal diagnostic, lens on students' in-class work and discussion, we observed several key points about students' experiences and learning in each step of the activity. Students were overall most comfortable with the first part of the activity, effectively communicating in groups and sharing their summaries of and opinions on the article content. In a few instances, students were able to make connections between the articles and their existing knowledge but many interpreted the articles through the lens of their preconceived notions. For instance, students revealed emotional and personal responses to the content of the article about mental health connections to gun violence. While not the focus of this activity, hearing about and responding to each other's perspectives on psychological content was a useful learning experience that permitted students to practice communication skills and to compare their understanding and responses with their peers' (American Psychological Association, 2013; Gross & Latham, 2011). In some instances, we interjected small group discussions to ask students to think more about the author's lens and purpose to help move to the next phase of the activity.

Students struggled most with part two of the activity when they were asked to think across articles. They tended to linger in and stall at summarizing similarities and differences in content. The goal of this phase was to have students think abstractly about how they approached, interrogated, and valued the sources and begin to construct a framework of key questions and issues for critical evaluation. For instance, rather than noticing that one article was about sleep habits while another was about reading to children, we hoped students would notice how the articles used different language and styles or employed different types of evidence and then would begin to reflect on the impact these variations had on their evaluation of a source's authority. In this phase, we often intervened in the small group discussions to help students move beyond summaries of content alone and instead build toward an evaluative lens on the content and the context of the sources. This phase of the activity was a useful reminder of the foundational perspective introductory students bring to class (Head, 2013; Head & Eisenberg, 2010; Hogan & Varnhagen, 2012) and the importance of mentoring students to practice critical evaluation.

Once students moved beyond the articles' concrete subject matter to talk about more abstract points of overlap and divergence, we noticed that their responses converged around four themes: the subject matter of the articles; articles' use of evidence and statistics; purpose and tone of the articles; and bias in the articles. That their responses to both the question of overlapping and divergent ideas and questions in the sources revealed the same themes highlights that these are areas of which students are most aware. Students most frequently talked about looking for evidence in the articles as "proof" of their truth and authority. They especially valued quantitative data and statistics as authoritative. Some students were also notably attentive to an article's purpose, tone, and audience, suggesting an awareness of an author's voice and intent in shaping a source and a foundation for deeper critical evaluation of sources. Recommendations to other students to "be skeptical"

and "watch out for generalizations" also indicated their awareness of thinking critically about the purpose and tone of sources. Notably, their references to adopting a skeptical attitude suggest that some students valued cultivating a disposition for critical thinking even if their behavior didn't reflect it (Hogan & Varnhagen, 2012).

The full class debriefing and discussion (part three of the activity) expanded upon the critical thinking that began in part two. Using students' discussions and ideas noted on the board, we reinforced strengths in students' conversations, corrected misconceptions, and challenged assumptions. We aimed to complicate the conversation to challenge students to make less rigid judgments of information as good versus bad and instead consider a more nuanced evaluation of sources' strengths and weaknesses in context, essentially that "authority is constructed and contextual" (Association of College and Research Libraries, 2016). The ensuing class conversation focused especially on themes that the student groups had written on the board and challenged them to: think about how data can be collected, presented, manipulated, and interpreted; consider the context of information sources through the lens of the author's purpose, the publication's production, and the audience's consumption; and the variety of types of possible bias and the inevitability of bias as no source or author can be truly objective. For example, we discussed challenges inherent in both quantitative and qualitative methods, such as study design, sample size, subjectivity, statistical significance, and correlations vs. causation. Additionally, we discussed the distortion that often occurs between original studies' findings and popular media reports thereof. We especially tried to reinforce cultivating an attitude of inquiry and being a good questioner, as key dispositions for information literacy development (Association of College and Research Libraries, 2016; American Psychological Association, 2013).

Limitations and Future Directions

Through the creation and implementation of this activity, we observed advances in students' critical thinking

and contend that similar assignments in introductory level undergraduate courses could be extremely helpful for information literacy development. Given the merits of this activity, there are also additions that we would make in its next iteration.

While our formative assessment provides a loose understanding of student development and learning, we did not collect individual data from each student who participated in the activity. This limitation provides several opportunities for further research about the impact of the activity on individual students' progress. In completing this type of activity again, it would be helpful to collect demographics of students' majors and possibly prior course content to note if their previous experiences prepared them in any way to be more comfortable with contextualizing and critiquing authority. It would also be helpful to possibly complete a pre- and post- test measure of students' information literacy skills to garner the direct impact of this type of assignment. Finally, it would also be helpful to collect individual student data, such as guided worksheets, after each part of the jigsaw activity. This would allow for additional insight into the process of students' understanding and insight. Each of these steps could be added to the activity and would be useful tools for educators to gain more insight into students' information literacy development.

Conclusion

Reflecting on the information literacy activity as a whole, students' group work and discussions suggested some development from opinions and assumptions to an introductory level metacognitive understanding of how to evaluate information sources, particularly from the popular press. Grounded in a constructivist approach, the activity asked students to begin with existing schema and summarize the concrete content of an article and then begin to widen their perspective toward more critical reflection on how and why to evaluate. The approachability of popular press articles, a type of source with which students are already familiar and comfortable, makes them an accessible entry point for

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deepening the information literacy conversation. This activity was developed for an introductory psychology course, yet could be useful across subject fields at the introductory level. Critical evaluation of popular press articles—and the often times misrepresented research claims therein (Last Week Tonight, 2016)—is an important part of information literacy. Successful attainment of these skills allows graduates to analyze evidence and consider alternatives, furthering their understanding of the "principle of connectivity" among information (Stanovich, 2007). Effectively navigating the information ecosystem is important not only for students in their academic pursuits, but also in their future careers and their daily lives.

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Table 1: Selected student responses regarding overlaps and differences between articles.

Theme	Overlaps	Differences
Subject matter	-There is a wide range of mental health -2 of the articles focus on information and sleep -Did they follow up to see the effects?	-Just about the article topics -Different ways the brain develops and how it affects different actions
Use of evidence, statistics	-Where is the evidence? -Where is the author getting their sources? -Is the information coming from a reliable source? -We all wanted to know more statistics on the topics -Lack of data/sources, etc.	-How did the authors collect data? Where did they get their data from? -What kind of studies did the researchers do to get these results? -Where's the data analysis? (more statistics)
Purpose, tone	-Gives information/advice -All popular articles – written to be accessible to the general public -Similar topics aimed at improving lifestyles	-Style of writing/style of the article -2 of the articles have more of a positive connotation than the other 2 -Intended audience -Giving life tips vs. information
Bias	-Each one addresses people as if they are the same ("this will work for everyone") -What are the writer's biases about the topic?	-What information on the topic was left out in the article?

Table 2: Selected students responses regarding advice they would give other students about how to evaluate any article.

Theme	Advice
Fostering an attitude of skepticism	-Don't believe everything you read, but don't automatically shut it down either -Be skeptical and don't trust the first article you read -Question whether something is fact or opinion
Caution against generalizations	-Watch out for generalizations -Understand vagueness of statements
Attention to source reliability and reputation	-Make sure data is coming from a reliable source -Make sure the source is reliable -Get proof from a reputable source before accepting something as being true
Awareness of audience	-Think about the audience -Popular articles – take them lightly, don't assume they're hard fact -Everyone comes with different interpretation and standpoint
Confirming credibility through evidence	-Look for evidence and facts -Check for sources - scientific evidence -Make sure research is credible -Understand difference in data – case study vs. stats

Humanizing the research process: Collaborative teaching and academic conversation
— Susan Dominguez and Mark Eddy

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Abstract

This essay is both report and reflection on a multi-semester, instructor-librarian teaching project for a topical, writing intensive general education seminar. Active learning strategies, embedded library services, and online assessment tools were utilized successfully to enhance student research skills and overall academic performance. Our approach humanized the research process for students and thereby strengthened their critical thinking and writing skills. The project also produced valuable insights into best practices for integrating information literacy (IL) and research skills instruction into undergraduate seminar curricula and programs. Guidelines are provided for initiating and optimizing instructor-librarian collaboration as well as project planning.

Keywords

Academic conversation, active learning, collaborative teaching, information literacy (IL), library services, transferable skills, undergraduate research and writing

Introduction

This teaching report describes multi-semester classroom collaboration between a writing-intensive seminar instructor and a Research Services Librarian at an R1 institution (Case Western Reserve University). While the instructor designed the course and was faculty of record, the librarian was integrated into the class throughout two consecutive spring semesters. Co-authored, this narrative is intended as a blend of executive summary, reflection, and report of our experiences. It will be of interest to any college instructor who incorporates a research paper into their curriculum—from the composition classroom to a discipline-specific capstone—and who desires students to develop healthy, transferable research skills. These skills include efficient information discovery and collection of background information on a topic, as well as the creation of in-depth, topic-specific, and focused bibliographies. The goal of our joint effort was to fully integrate the library and the librarian into the course to help students build effective library research skills and strengthen their overall academic performance. In addition to illuminating the influence of student demography and working group dynamics on academic perfor-

mance, our project findings also suggest that the research skills-building process may need renewed emphasis in 21st-century undergraduate pedagogy.

The advent of digital access to information of all kinds in the past two decades has unexpectedly facilitated among young adult learners a profound disconnect between information sources and the people who create them. Instructors now teach a "plugged-in" cohort of college-aged millennials (Generation M) with learning styles that differ markedly from those of previous generations. First- and second-year college students today often miss the connection between critical information seeking and research practices and critical reading and review of scholarship . Pedagogic methods and learning strategies that help millennials bridge this gap now figure prominently in professional undergraduate teaching texts (Bean, 2011 ; Cvetkovic & Lackie, 2009). Dispelling persistent myths about millennials' presumed technological expertise and engaging a librarian as a guide are essentialcritical pedagogic steps in helping students contend with the vast array of "information" available via the Internet (Boyum-Breen, 2017; Gillaspy-Steinhilper, 2012; Maestretti, 2009).

Students must understand what types of sources to use in different stages of the research process as they move from the broad parameters of topics covered in reference materials to highly focused, discipline-specific academic conversations that take place in monographs and journal articles. College students must reconnect information sources to authors and view sources and authors together as part of an ongoing conversation, rather than as a static collection of data (Boyum-Breen, 2017, p. 8-9). This perspective on undergraduates and undergraduate teaching informed the goals for our project. The aim of our collaboration has been to help students engage more fully the dovetailed connections between research strategies, critical thinking skills, and the writing process.

Methodology & Strategy

Our strategy was to integrate best practices for teaching information-gathering skills into a topical, writing-intensive course in which students would learn how to negotiate several stages of an interdisciplinary research paper assignment: a proposal (including a research question), preliminary bibliography and working thesis, multiple drafts, as well as peer and self-review techniques, such as reverse outlining. The course, "Native American Environmentalism: Sustainability and Contemporary Energy Technologies," lent itself naturally to cross-disciplinary inquiry and information searching. The course syllabus outlined library involvement with regard to IL skills surveys, as well as the level of librarian presence in the classroom and the use of the online course management system. Each assignment design served as scaffolding for the final research paper. The assignments included, for example, in-class student group presentations on course topics, as well as an interdisciplinary annotated bibliography drawn from the following genres: tribal websites, news articles, government websites, books, social media platforms, academic reference source(s), and maps. Students were also introduced to citation management applications (RefWorks, Zotero, CiteULike, etc.) as valuable tools for project organization and management. For our IL assessments, we used the TRAILS (Tool for Real-time Assessment of Information Literacy Skills) survey instrument collection developed at Kent State University (201704) for school librarians and teachers to measure IL skills competencies. TRAILS instruments are publicly available online and include test batteries for third, sixth, ninth, and twelfth grades, with individual instruments in each for measuring competencies in topic development, identification of potential sources, searching strategy, source evaluation, and the responsible use of information.

We implemented our plan in the Spring 2013 semester with the goal of effectively supporting each stage of student research project development. Prior to the beginning of the semester, we held meetings to plan IL skills training sessions and exercises, as well as our assessment strategy. The librarian created an online li-

brary resource and research guide and integrated it into the Blackboard course site; he had full instructor privileges in order to post relevant announcements, links, and readings. The library guide included links to key academic library reference resources, book collections, and topical periodical databases, as well as information on how to conduct research and use resources strategically to find relevant and appropriate sources. Equal and independent access to this site put our class librarian on parity with the instructor in students' eyes and improved our communication and collaboration. The library research guide was specifically designed to help students build skills incrementally over the course of the semester; the "front page" placement of this guide on the course management site enabled students to open it immediately without having to navigate additional layers of the site.

Each step of the research process in the course was accompanied by a writing exercise designed to reinforce the idea that information seeking and selection, research, critical thinking, and writing are not isolated activities, but in fact are inextricably linked together. To help them hone their topics, students also compiled preliminary bibliographies that included an e-reference source, a peer-reviewed article, and the original source that drew their attention. In the classroom, guidance from the librarian eased this process for students tremendously, especially with regard to the evaluation of e-books and obscure news outlets. Students were also required on a regular basis to verbally articulate to the class in mini-presentations the progress of their research and working theses.

The instructor and librarian met weekly during the semester to discuss the progress of skills acquisition based on survey data and in-person student interactions; subsequent efforts focused on helping students develop a core set of IL research strategies. These were: (a) discovering the vocabulary and background context of the topic using traditional and nontraditional reference sources, and strategic use of subject indexes in books, reference works, databases, etc.; (b) determining the

types of conversation(s) taking place in a particular research area or community of discussants; (c) focusing on aspects of the conversation most relevant to student research interests; and (d) evaluating the conversation critically in support of a thesis.

Student IL competencies were surveyed three times in the first round (Spring 2013) and twice in the second round (Spring 2014). Using survey assessment data collected at the beginning of the semester, we identified a baseline profile for IL skills competencies among the students. At the beginning of the Spring 2013 semester, the TRAILS ninth grade general IL skills assessment instrument was used to determine each student's basic competence level. In subsequent assessments during the semester, the TRAILS twelfth grade general skills instrument was used to track improvements in each of the core IL skills previously determined as essential for student success in the course. Adjustments to instruction were prepared accordingly for subsequent librarian classroom visits, small group activities, and individual project consultations, all of which depended upon student adherence to the writing schedule.

Project Results & Findings

Incoming first-year students often are completely unfamiliar with either academic library resources or core information searching and project planning skills. This knowledge deficit became clear in our initial IL skills assessment with students at the beginning of the 2013 semester. Several students, for example, lacked a basic understanding of core decision criteria for evaluating the credibility of information sources. These criteria include: identifying appropriate resource types, establishing the purpose and origin of a source, and determining the authority of authors and their organizational affiliations. A majority of students also were completely unaware of guidelines for properly acknowledging sources of information. These findings in the early stages of the semester helped us realize that introducing students to the full gamut of research and IL skills within one semester was impractical. We chose instead to prioritize a subset of critical IL skills that would best serve their aca-

demic success in each stage of the course. To accomplish this goal, we took steps to further embed the librarian and library services into the course; we continued to measure student progress periodically throughout the semester through scaffolded writing assignments and verbal reporting. We then made strategic adjustments in our instruction plans, in some cases to address individual student needs.

By the end of the first round of the project in the Spring 2013 semester, we observed significant overall improvements in academic performance outcomes. This was strongly correlated to the instructional and library service integration strategies that we implemented. Newly acquired research and IL skills were clearly evident in the quality and appropriateness of students' information source selections, as well as in the overall organization and writing quality in their final papers. The TRAILS instruments identified specific IL skills challenges among the students, and we used the assessment data effectively to adjust and focus our instructional and scheduling strategies. Our robust integration of library services and resources into the physical and digital spaces of the course also contributed positively to student engagement. Embedding online research guides and other sources directly into the course management website definitely increased student awareness and use of library collections. Reducing student anxiety about research also made it possible to allocate more time for writing instruction and guidance for revisions. The regular in-class presence of the librarian for project progress reports, focused small group work, and for individual student consultations, effectively improved student performance outcomes.

T hese outcomes were also confirmed by end-of-semester student feedback. Students noted that the quality of their academic experience was positively enhanced by our approach, with 90% of the 16 students indicating that they learned valuable information about library resources and research skills. Student comments also overwhelmingly indicated a "better handle" on the research process. As one student noted, "It was easy to write and do research on topics you really care about . . . I loved

the hands-on learning [a]nd the combination of writing and learning." Other students wrote: "The writing and research process worked well"; and "Keep the book discussions and the librarian who came to help us. Both were extremely helpful when it came time to write our research paper" (USNA 287D evaluations, April 2013).

Comparing the first and second rounds of the course, however, we observed two important and interconnected factors influencing our pedagogic effectiveness: (a) student demography and (b) structured group work. The Spring 2013 class roster was relatively homogenous, comprised mainly of first-year students new to undergraduate academic work, and thereby possessing a vested interest in IL and research skills acquisition. In the Spring 2014 round, however, second- and third-year students made up half of the class roster. Only three of the fourteen students enrolled in Spring 2014 were first-year students, and more than half of the students were taking their second of two required seminars after the initial first-semester seminar. Importantly, a majority of students in the second round had already engaged research and IL skills to varying degrees in other classes.

The demographic shift to having a majority of students with IL experience in the 2014 round fundamentally influenced the communication dynamic and research progress among students working in small groups. Whereas grouping students exclusively by a pre-designated research theme proved very effective in the 2013 round, this same scheme in the second round was less effective. We may have underestimated how well students with more academic experience could model solid research skills for less experienced undergraduates within group work. Some of the second- and third-year students in the 2014 round viewed the library support as unnecessary, perhaps not recognizing any need to continue cultivating transferable IL skills. In this respect, they may have regarded the librarian as an outsider, rather than as a course collaborator. Mid-term feedback revealed two students also regarded the research paper guidelines, writing instruction, feedback, and revision suggestions provided by the course instructor as remedial (with exception of fair use). However, all students

in the class did learn new skills and benefit from our library and writing instruction, as was reflected in the quality of preliminary bibliographies and paper drafts. It was clear that our collaborative approach in both rounds presented distinct advantages for enhancing undergraduate student academic performance. Thorough integration of course content with personalized library services and IL skills training, combined with active learning frameworks for course design and session planning, were highly effective in improving overall student learning outcomes among a greater number of students in each round of the course.

Insights & Reflections

A lack of core research skills can fundamentally undermine students' use of information technology and contribute to a disconnect between information sources and the people that create them. As undergraduate pedagogy media studies teachersscholars, Duncan and Arcus have noted, that millennialsembers of Generation M, " "may surf the Net, but that does not mean that they think about how, why, and what they are doing" (as quoted in Maestretti, 2009, p. 23). Moreover, as academic librarian Thomas Eland has observed about students, "'when you push them [undergraduate students] to critically analyze thethe sources, they just don't know" . . . [they] just take in and really don't have the tools to critically unpack it'" (as quoted in Maestretti, 2009, p. 23). As we observed, having students move from viewing information as a pile of data to appreciating the human conversation and exchange is a critical but sometimes overlooked step in the undergraduate research skills-building process. If students are to discover their own voices in scholarly conversations, they must engage critical research and critical thinking skills together as part of the same process of academic inquiry. This process of inquiry is most effective when students learn core research skills in carefully designed, active learning scenarios.

In many instances, however, IL skills are too often presented as ancillary ingredients of student academic inquiry that support, but do not directly contribute to the critical thinking and writing process. Early active

learning theorists such as Charles Bonwell and James Eison (1991) characterized the writing process as the central venue for stimulating critical thinking. John C. Bean (2011) acknowledged that a librarian can be a valuable facilitator of the research process, noting that, "[t]eaching students how to find and evaluate sources within a disciplinary field is often best accomplished when the instructor collaborates with a reference librarian" (p. 230). Often overlooked in current active learning scholarship, however, is the need in undergraduate curricula for a clear IL skills training strategy presented explicitly as part and parcel of critical thinking and writing skills pedagogy.

When students realize that documents and information sources represent ongoing discussions among actual people, rather than static repositories of facts and information, the scholarship truly comes alive for them. Transitioning to this mindset also effectively disabuses students of the pervasive notion that there is one perfect "go-to" for all information gathering needs. The "humanized source" mindset becomes critical also as students begin to wrestle with key questions involved in crafting a well-developed thesis: who are the most relevant voices in the conversation, how do they present the topic, and what specialized terminology (keywords) are they using? Strong thesis development depends directly on finding and critically reviewing sources within differing scholarly conversations. Following the citation trail with this mindset is not merely a data collection activity, but instead becomes the process of reconstructing a conversation.

The challenge of demystifying academic conversations can be addressed more fully in collaborative teaching models where instructors and librarians work together to reinforce learning frameworks (Connaway, Lanclose, & Hood, 2013; Gillaspy-Steinhilper, 2012). These frameworks facilitate student connection between information discovery and critical evaluation, thinking, and writing as part of the same process in academic inquiry. IL skills assessment can play a critical role in this endeavor, helping instructors and librarians evaluate how well students are making these connections during

a course. This became especially important in assessing our second- and third-year students from the 2014 round of the study. We learned the importance of not making preliminary assumptions about basic IL skills competence. Students may very well not be on par with one another by their second, third, or even fourth years, and this has important implications for course planning and design, as well as for in-semester adjustments to course activities.

This multi-semester project also provided a unique opportunity to combine, test, and evaluate the effectiveness of several traditional IL skills training methodologies in the same course venue. Based on results, IL instruction offerings have since been modified significantly to focus more closely on first introducing strategies that help students quickly discover relevant and appropriate sources for their work, rather than focus on the intricacies of database navigation and search procedures (a natural tendency in IL instruction). There is now a greater emphasis on introducing students to (a) the core techniques of efficient knowledge discovery, (b) the proper sequence of source type usage, and (c) a contextualized understanding of how sources represent parts of ongoing conversations among researchers, scholars, and other discussants, rather than static repositories of facts and information. These changes in pedagogic emphasis regarding information seeking habits and research mindsets leave students better prepared to think more critically about source selection and content. The change in emphasis can also help instructor and librarian collaborators identify older, less effective IL training methods that should be eliminated.

Whenever possible, the "active learning," "flipped class" model of IL instruction is also recommended, as project data clearly demonstrated the benefits of this learning approach. There are two distinct advantages in active learning pedagogy. First, it effectively mitigates many of the logistic challenges associated with planning traditional, presentation-style IL sessions which rely primarily on passive learning, and where students do not immediately begin to engage new information-seeking techniques. With an active learning session format,

less time is spent preparing database search procedure presentations; students instead are moved quickly into group work with a set of basic searching guidelines. As students work through exercises and test-drive database resources selected beforehand by the librarian and the instructor, students have more time to pose questions and receive individualized consultation and direction during class sessions. The second advantage with active learning IL instruction is that it quickly directs students away from a typical over-reliance on search platforms like Google, Google Scholar, and Wikipedia in information seeking. This information-seeking behavior at the undergraduate level often contributes to the well-known "data dump" term paper where students collect information and sources randomly, and produce papers with incoherent analyses and disjointed writing.

From the instructor's perspective, active learning methods, such as group work and students following along with an Internet-based search on their own devices, lend themselves easily to integrating IL skills activities into the entire research process. Activities also include small group conversations for brainstorming, crafting questions, identifying main ideas, and sharing opinions. Additionally, the learning experience of this project keeps on giving, both by validating successful active learning strategies and by demonstrating the effectiveness of skills assessment. In addition to reinforcing effective and practical research skills, the incorporation of IL pedagogy contributed to meaningful exchanges in working groups and in larger class discussions about the conversations and discussants represented in the sources. Forming small groups for the research process according to themes was smoother in Spring 2013, since topics were easily sub-grouped and since the majority of the class was new to academic research. In 2014, however, some student projects emerged quickly, due in part to varying levels of IL competence; working groups thus developed according to IL skill levels and the students' pace of research, regardless of topic. This grouping strategy placed first-years together while second- and third-year students comprised the remaining groups. In the first-year group, students encouraged one another in

creating in-depth bibliographies for their projects. In the remaining groups, discussants focused on explaining their research process, having already built their bibliographies. Differences in working group dynamics between the 2013 and 2014 rounds thus illustrate the importance of paying close attention to group demography and variations in IL skills levels among students in a course. These distinctions were evident in student progress reports presented in class by second- and third-year students, compared to first-year group members, who were still working through the research process.

The classroom dynamic in discussing course content and research paper topics through the "IL lens" also stimulated ideas for modifying subsequent class sessions. Student performance and responses to in-class activities were also factored into these adjustments. This adjustment process continued until both the librarian and instructor were satisfied that student mindsets for information seeking and evaluation had developed sufficiently to support academic performance goals. Admittedly, in both semesters, the quality of student writing did not always correlate with the quality and depth of student bibliographies. The next rendition of the course may require more student accountability for writing time, more scaffolding of project components, and more feedback from the instructor on both content and student writing.

Concluding Remarks & Recommendations

We were successful in fully integrating IL library services into a semester course, and in enhancing student development of library research skills and overall academic performance. Our findings also suggest that projects in embedded library instruction services can yield valuable insights into established curricula, and help instructors determine best practices for integrating IL and research skills instruction into writing-intensive undergraduate academic programs. The use of various learning models, assignments, and IL instruction services for such projects, however, requires careful consideration of the unique and sometimes challenging circumstances among students in each instance of a course. These and

other challenges can be mitigated effectively with the use of IL skills assessment tools and subsequent adjustments to instruction strategy. Short of universal standardization, there are several recommended guidelines for optimizing collaborative course/IL skills instruction project planning across different undergraduate courses and programs.

Reaching out to the librarian community on campus is an instructor's best first step in determining what IL skills training and collaboration options are available. Many librarians are likely already working on IL service initiatives for the campus community, and have a vested interest in learning more about the particular teaching interests, goals, needs, and working styles of instructors. Librarians typically can offer various types of support and collaboration based on the instructor's needs and preferences. In exploring a course-long project for extended library service integration, however, collaborator compatibility, as well as a shared openness to moving outside normal comfort zones of instructional methodology and strategy, will be especially important. Collaborators should begin project exploration well ahead of the semester in order to discuss instructional strategies, review course content, and explore options for ready-made or custom-designed assessment tools. Make sure to plan for a level of library service integration that clearly establishes for students the librarian's role as a course collaborator, rather than as a distant, ancillary support resource. Work with the librarian collaborator also to create a customized online library resources guide that is keyed to course content, assignments, and learning objectives (Eddy & Dominguez, 2013).

IL competencies should be assessed early in the semester, as student performance expectations will likely need revision and clarification based on results. Subsequent assessment during the semester would further inform planning and content changes. Some of the changes must be implemented at the point of need, to ensure that students make steady progress in acquiring the core IL research skills critical for success in scaffolded assignments and research projects. Course modifications and activity planning during the semester should also reflect

careful consideration of student demographics, working-group dynamics, and possible untested assumptions about student IL skills competencies. Whenever possible, IL research skills training and other course components should be designed according to active learning methods and with an eye toward presenting the research and writing process as "strategy, not source." This mindset emphasizes the strategic use of appropriate sources at each stage, rather than reliance on one particular resource or search engine, to find and engage the scholarly discourse. Activities that help students humanize the documents they utilize are particularly effective.

To continue to be an effective educator is to embrace change and occasionally leave one's pedagogical comfort zone. This may require not only adjustments from previous class experiences, but also continued professional development in terms of current pedagogical conversations concerning the diversity of Generation M. As librarian and instructor, we continue to reap the benefits of the unique collaboration style that developed in this project. Our enhanced knowledge of student research needs and behaviors has informed our subsequent independent and collaborative instruction design activities. In our next iteration of the project, for example, we plan to craft customized IL skills assessment questions that attend more closely to demographic variations and inform our strategy for accommodating students who may or may not be familiar with basic academic search methods. After IL skills background information is collected, an initial assessment survey will be administered three weeks into the course. Again, as with the writing assignments, library "research" activities will be scaffolded from single source "hot topics," to in-depth, scholarly research for larger project topics. Continued adjustments will enhance pedagogical practices that most effectively engage college students in mastering research, critical thinking, and writing together as one process.

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First-Year Seminar Program Evaluation: A Focus Group Study

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Abstract

First Year Seminars (FYSs), identified as a best practice by the AAC&U, are an increasingly common piece of the curriculum at colleges and universities. This article reports on the findings of focus group research on the first-year experience at a small regional university. It addresses the value of qualitative research in program assessment, provides a model for collaborative assessment projects, and presents findings that suggest that the division between "academic" and "orientation" FYS programs does not reflect student experiences and needs in "academic" FYSs. This article also reflects upon the value of faculty training within First Year Experience (FYE) programs. By looking at the first semester experience through the eyes of the students themselves, this paper provides important information about how to support both the transition to college and aid in student retention through first semester efforts.

Keywords

first year seminar, student retention, student transition

First-year seminars (FYSs) were created to introduce students to the college experience and to support their academic interests, achievements, and social networks. These seminars are often designed to ease students into challenging college expectations by showing them available resources and broadening their thought processes through critical thinking and active learning. Although prevalent on many campuses, these courses vary in learning objectives and format. Beginning in the early 20th century, institutions implemented FYSs to assist students in the transition to college. With growing popularity in the late 1970s, a redesign of FYSs led to a greater focus on student retention (Keup, 2006). The American Association of Colleges and Universities (AAC&U), in their 2008 list of "High Impact Practices", included FYSs or experiences (FYEs), and, following their lead, many colleges and universities incorporated them into their curricula. Instructors of FYSs aim to improve retention by academically and socially integrating students in their new academic surroundings. While such classes may be theoretically a "high impact practice," the process of implementing and delivering these courses is crucial to their success.

Rigorous, qualitative research through focus groups provides a valuable and needed insight into the value of FYSs, and offers a depth of analysis to complement more traditional, quantitative metrics such as retention

rates or scores on student evaluations. At our institution, FYSs are not housed in a single discipline or department. Thus, assessment of this program can be difficult. However, assessment data is an important tool in program development, helping to maintain and expand institutional support for the program, as well as for grant applications. In addition, while FYS flexibility and interdisciplinarity is a strength, it also makes it easy for administrators, department chairs, faculty, and student affairs staff to attempt to solve broader problems in the student body (such as alcohol abuse) by adding material into the FYSs and potentially overloading the courses with unachievable goals. Assessment, done well, can clarify vision and help set goals, while justifying practices to others. While quantitative data has its uses, our study revealed the benefits of focus group data as well.

Our project was designed to evaluate one institution's FYE program to identify, through the eyes of students, areas of strength and needs for improvement. It was also our goal to provide information for faculty development and training to prepare instructors who are new to teaching these courses or who may struggle with their current classroom format. Our qualitative results revealed that the traditional division between the "orientation" and the "academic" models of FYSs obscures the ways that faculty teaching these academic seminars can play important roles in the emotional and social lives of incoming students. Face-to-face experience and building community within the classroom were prominent discussion topics among participants, suggesting the importance of faculty-student and student-student interactions. Other highlighted topics include academic rigor and the instructor's role.

Our project was the result of collaboration between the FYE program, then coordinated by professors in the History and Mathematics Departments, and a professor in the Psychology Department who specializes in the transition to college and who teaches research methods. The use of qualitative data to assess programs needs to be done in a rigorous, ethical manner. Running focus groups is a skill that is part of many academic programs

and majors. In this case, the psychologist could incorporate the experience of running focus groups into her independent study research and teaching. Undergraduate students ran the focus groups and wrote reports, under the psychology professor's direction. In this way, the paths and benefits of collaboration and interpretation lay in multiple directions. The FYE program could get high quality information at a very low cost (gift cards for focus group participants). Undergraduate psychology students earned credit and participated in a real-world project with value and significance to the broader college community. The psychology professor widened her teaching portfolio and developed opportunities for student/faculty research. Psychology may be a natural partner in these efforts; sociology departments also have courses in qualitative methods and have faculty trained in the running of effective focus groups.

First-Year Seminars: Academic and Orientation Models

FYS curricula vary based on a given institution's goals and expectations, but many seminars use similar instruction and activities to support students (Yockey & George, 1998). The objectives for many FYSs involve institutional connection, campus resource recognition, and academic skill development. Instructors of these courses teach specific strategies and techniques that promote students' academic growth and success in the college setting. Students are connected to academic resources, campus events and extracurricular clubs within the campus community. From a national survey that 896 institutions completed, the three course topics that were the most consistent in the curricula were study skills, critical thinking, and campus resources (National Resource Center for The First-Year Experience and Student in Transition, 2013). Other frequent course topics were academic planning/advising, time management, college-level study strategies, writing instruction and techniques, library tours, career planning, campus involvement, international programs, campus culture events, and service learning (Feldman, 2005).

Within a broad framework designed to ease the transition to college and increase retention rates, FYSs can vary greatly. Many divide FYSs into "orientation" or "academic" models. "Orientation" seminars are frequently taught through Student Affairs departments and focus upon the emotional and life skills required for success at college; they may or may not count for credit hours. Other institutions offer an "academic model" seminar that is a credit-bearing academic course focused more on bringing a small-class, seminar-type experience to first semester students, who are usually otherwise in large, introductory lecture courses. These FYSs involve course topics and materials designed by the instructor. Face-to-face experiences in the seminars are designed to build a classroom community that supports learning in college.

At our institution, a small regional university in central Massachusetts, all incoming first-year students are required to take a first-year seminar. These credit-bearing courses are capped at 20 students and do not share a common curriculum. As part of the general education curriculum, all FYSs must address oral and written communication, information literacy, and critical thinking, but the professors are free to develop their own content, topic, and theme for the course. The three-credit courses are designed to be academically rigorous and consistent with the "academic model" for first-year students as they adjust to their new college environment. Some aspects of the "orientation model" are expected to be introduced to students; these include first-year transition concerns (i.e., college-level learning strategies and time management) and academic resources (i.e., Writing Center and library support).

First-Year Seminar and Faculty Development

It should not be surprising that teaching an FYS can be quite challenging for faculty members owing to the lack of student experience with college work and the open-ended seminar approach to teaching. Faculty members typically use a variety of reading sources and inventive assignments involving written and oral communication, but they can often struggle to create

learning objectives that match first-year students' abilities. Anecdotal feedback from faculty teaching FYSs highlighted their impression that the immaturity of the students was often focused and concentrated within the FYS; however, this could be expected at some level given that students are coming straight from the high school environment. Many first-semester students often take a passive approach to learning, and faculty could find it difficult to move them to more active learning models. In addition, given the open-ended nature of FYSs at our institution, faculty often selected topics that fell outside of the traditional introductory course model, so there was no established roadmap or textbook on how to select and teach the material.

Faculty development is crucial to create a sense of community among FYS faculty, encourage more full-time faculty to participate in the program, provide support for faculty teaching these seminars, and improve the quality of teaching in the program. An aim of this qualitative focus group program evaluation was to gain knowledge that could further support faculty development for those who teach these seminars.

Starting in 2014, and funded through an internal grant process that supported annual training for two additional years, FYS instructors at our institution were invited to participate in a paid, three-day training to support their FYS teaching. The faculty teaching FYSs must have the minimum qualification of a masters' degree. FYS faculty have been historically equally divided between full-time faculty, staff, and adjunct faculty. All three groups were invited to participate in the training. At this training, faculty members were encouraged to work within an FYS model that was flexible, integrative, and academic. Professors were reminded that they had considerable freedom to design their seminars, and that each seminar was therefore a place to experiment and make new connections. They were encouraged to consider the "whole student" in their classrooms and to find ways that academic content and skills could speak to the social, emotional, and developmental situation of the student, and vice versa. For instance, using autobiography or memoir as the basis for writing assignments

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can help students see the personal relevance of academic material. In addition, faculty were given extra training on how to help struggling students find the support and services they might need outside of the classroom. Faculty were also supported and encouraged in their efforts to bring academic rigor to the FYS classroom not only by demanding college-level work in the classroom but also by offering support to students by exposing the hidden curriculum of college. Considerable time in the training was devoted to the possibilities of building an intellectual community within the FYS classroom, through seminar discussion, peer review of writing, writing workshops, and out-of-classroom experiences.

After completing this training and subsequently teaching an FYS, instructors developed new questions, concerns, and fears about their classroom environment and student expectations. Many faculty fears centered upon having expectations that were too high for the students in their seminars. Instructors reported that students complained that they assigned more work than other instructors. The lack of community among FYS faculty members, who were spread out across the university in different departments and who also included professional staff and adjunct professors, intensified this sense of unease. Thus, our research was designed to hear directly from students about their first-year transition needs and their expectations to identify core curriculum topics and classroom techniques that could be transferred across disciplines and departments offering first-year seminars.

First-Year Seminar and Student Experience

As students transition from high school to college, they encounter a new environment that may require academic and social adjustments. Postsecondary academic work typically requires different learning strategies from those used in secondary school work such as self-generated critical thinking, metacognitive abilities, and organization strategies for deep level synthesis. From a social perspective, meeting new people in college may require different strategies, such as introducing oneself to strangers and organizing social gatherings, compared

to those used to maintain established friendships in high school. Struggling to adjust in college is common when students are not equipped with appropriate study skills, learning strategies, social skills, and coping mechanisms. Some students have trouble managing their time between social and academic obligations and taking on personal responsibility for learning new information, which impacts their class attendance, assignment completion, and examination performance (Pancer, Hunsberger, Pratt & Alisat, 2000). First-year college students may not be prepared for large lecture halls and limited contact with professors as compared with the small classrooms and daily interactions with teachers they experienced in high school. For these reasons and more, institutions offer a variety of programs and courses, such as FYSs, to assist in the college adjustment while students are experiencing a possibly stressful transition that can be overwhelming at times during the semester (Feldman, 2005).

Adjustment is considered a multifaceted concept based on students use of coping responses (or strategies) when confronted with new demands in their environment (Baker & Siryk, 1984). Academic adjustment is defined as how well students respond to the assorted educational demands that are common at the college level. Social adjustment is defined as how well students respond to the interpersonal demands presented to them in a new environment, specifically the college campus (e.g., making friends, participating in groups and clubs). College adjustment is shown to relate to academic performance, persistence (i.e., graduating within six years of starting college), and personal self-esteem, which is why many institutions provide opportunities for first-year students as they are transitioning and adjusting to their new academic environment (Bettencourt, Charlton, Eubanks, Kernahan & Fuller, 1999; Pancer et al., 2000; Wintre & Bowers, 2007).

As mentioned above, FYSs are one example of opportunities designed to support college adjustment for incoming students. These seminars appear to facilitate students' transition into college as evidenced by their academic performance (course grades and semes-

ter GPA) and retention (Andrade, 2007; Keup, 2006; Lifton, Cohen & Schlesinger, 2008). This research has involved pre- and post-assessments in the first semester and year of college. Other results that support the presence of first-year seminars in the general education requirements are based on comparisons between students who have and those who have not participated in a first-year experience course (Sullivan & Baker, 2013). Our qualitative research intends to supplement and enhance what quantitative results show about the benefits of FYSs. The benefits and, in some cases, necessity of these FYSs for students as they enter the college environment should not be forgotten when designing curriculum and assessing outcomes.

Focus Group Methodology and Procedures

To better understand the FYS experience at our institution, we developed a plan for focus groups. We had institutional data indicating moderate improvements in student retention in the first year, as well as survey results from first-year students suggesting satisfaction, though limited enthusiasm, with their first-semester experience. This data was collected by the university administration and provided to the institution in a summary report. Such data, though, were aggregated and lacked depth as to which pieces worked and which did not. Focus groups thus provided a vital piece for the broader assessment picture. The focus group study addressed how students viewed their first-year experience as well as their FYS classroom environment and learning experience. The faculty researcher and student researchers ran each focus group and were not directly affiliated with the FYE program or curriculum.

Participants. The focus group participants were 26 first-year, second-semester college students who completed a FYS in their first semester. The majority of participants were female (72%). Various academic majors were represented in our sample, including nursing, psychology, education and biology. A total of five focus groups were run with first-year students. Each focus group had a range of 3-7 students who participated. Participants were recruited using email correspondence and an on-

line sign-up website. Participants received a $10.00 gift card for their involvement. Faculty and university personnel were not interviewed for these focus groups.

Procedures. Focus group sessions occurred in a windowless laboratory room with sofas to create a relaxed environment. Refreshments were provided for the participants. After completion of the informed consent and a brief review of the focus group process, the researchers had participants complete a brief introduction ice-breaker. Names were not shared during this process unless students elected to self-identify. Researchers had approximately ten questions for the one hour focus group. Examples of the prepared questions are "What is the first thing that comes to mind when you reflect on your first-year seminar?" and "How was your first-year seminar similar to or different from your other classes?" Follow-up questions were also created to support the main questions. Participants were asked to discuss and respond to questions about their experiences with the first-year program as well as their general transition to college. These questions involved academic and social components of college. Participants were informed that they did not need to share sensitive information. Focus groups were audiotaped to gather all information mentioned during the interviews. This project was approved by our institutional review board.

Data Analysis. Qualitative analysis was conducted to address the curriculum and program goals. Our intention with these results was to build on current faculty development guidelines with institutional-based results aligned with previously published first-year experience practices and theory by others (Andrade, 2007; Upcraft, Gardner & Barefoot, 2005). We also sought to explore how the expectations of the seminar matched the students' views of the classroom experience.

FYS curricula are often structured around the seven principles that Chickering and Gamson (1987) claim impact the college experience. The "Inventories of Good Practice in Undergraduate Education" was generated from 50 years of research on teaching students and how students learn. Chickering and Gamson's (1987) seven

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principles are (1) promoting student-faculty interaction, (2) encouraging student cooperation, (3) promoting active learning, (4) providing prompt feedback to students, (5) stressing time spent on a task, (6) establishing high expectations, and (7) appreciating diverse learning styles. With these principles and the program goals in mind, researchers analyzed all student responses to identify common themes. Two student researchers transcribed each focus group audiotape and then separately categorized responses. The faculty researcher met with the student researchers to compare and discuss organization of responses based on themes for inter-rater reliability purposes. Our results were categorized into four area: academic expectations, classroom community, peer interaction, and communication outside the classroom.

Study Findings

Academic Expectations. The high expectations in college are often a surprise to first-year students. Consistent with the design of the FYE program, students expected that their FYS would assist in the college transition. One participant reported "Responsibility and independence were expected by our professor and I needed to be ready by being organized. Although I liked the independence, it was an adjustment because professors typically did not provide frequent reminders about assignments." Many students perceived that the course would directly relate to their academic major, while others thought the course would be informative toward broader academic topics such as work ethic and time management. This finding highlights the topic of depth versus breadth of material covered during a semester. Other institutions do offer seminars linked to students' academic major; however, this can be taxing on some departments (i.e., Business, Education and Psychology) (National Resource Center for The First-Year Experience and Student in Transition, 2013).

Although not all FYS topics could be integrated into academic majors, the class content expanded students' knowledge by pushing them to think beyond their initial interests. The instructor's passion for the course content contributed to positive experiences and less nervousness at the beginning of the semester as reported by the students. However, students' lack of interest in the topic did impact the overall course experience. This finding speaks strongly to how professors teach course material that is applicable and relatable to students' daily life. Guidance and assistance from professors on class projects related to students' success in the course while also increasing their confidence for future academic success. Consistent with past research, the support from professors reduced the initial daunting expectations that some students bring to college (Delaney, 2008). Further, the engagement and enthusiasm within the classroom environment from both the professor and peers seemed to impact students' motivation to learn.

Consistent with the "orientation model", campus resources were often incorporated into course topics supporting students' familiarization with campus programs and services that aim to benefit learning. Resource tool presentations, including Blackboard, Library, Writing Center, poster creation and printing, and time management, were appreciated and used beyond the seminar requirements; however, students experienced varying levels of resource instruction based on the class instructor. The inconsistent resource presentation across courses resulted in some first-year students who remained unaware of institutional resources in their second semester. It seems that students' academic adjustment is based on being introduced to the variety of campus resources available compared to their own resource exploration. This inconsistent presentation of campus resources is an area in need of improvement within faculty development to provide students with resources for academic success. Identifying the necessary amount of time spent on these resources is an additional question to explore in the classroom and research.

Turning to the perceptions of the "academic model", FYS requirements ranged from challenging to light workloads involving weekly journal entries, research papers, group projects, and presentations. Students reported the benefits of writing assignments and the revision process as it assisted in understanding college-level writing expectations. This finding provides evidence for the need for college-level writing practice in the classroom, as many students struggle throughout their academic career with their writing ability. Intellectually stimulating and challenging course material contributed to preparing students for traditional college course requirements, expectations, and necessary study routines, which in turn benefited their first-year transition. Students who had a heavy workload in their FYS commented on their ease of transferring information and resources they learned to other courses. Other students felt unprepared when their FYS requirements were inconsistent with their high-demand college courses; however, they did appreciate that the seminar seemed an extension of their high school experience. Participants who had a lighter workload in their FYS class reported their "professors said they know students have other classes that are more difficult so they made the FYS easier." Although students appreciated lighter workload courses, these courses may have provided an inaccurate expectation of the traditional college course. Conclusions from participants' responses suggest that faculty development training should focus on the potential benefits of a challenging FYS as both preparation for and introduction to college academic expectations.

Classroom Community. Classroom community refers to class size, organization, participation, and active collaboration between the professor and students. These community topics impact the student-faculty interactions, student cooperation within the classroom, and the ability for active learning as part of Chickering and Gamson's (1987) principles. Students were pleasantly surprised by the small class sizes and discussion-based instruction. Classes of 20 to 25 students with desks arranged in a circle allowed for a more intimate learning environment and promoted social growth. Participants also appreciated having the same peers in at least two of their classes (FYS being one of these classes) because they felt "more comfortable going to class because I know that there are people that I always will know there, instead of complete strangers." The appreciation of the classroom environment design speaks to a central goal within the FYS initiative: the classroom community unites students and supports their campus connection (Upcraft et al., 2005).

The class structure was less intimidating than originally perceived, allowing students to feel more comfortable and participate in discussion. This sentiment is shown with two response examples "I'm more likely to speak up with the comfort of people I know than strangers who have never seen me before" and "by the end of the semester all of us knew each other and were like friends." First-year students preferred classes where professors facilitated discussions as these interactions enabled them to express their opinions, gain new perspectives, and meet their classmates on a personal level. Greater focus both on academic and social changes when entering college and on the required academic material were recommended by students. This finding suggests that students prefer the "academic model" approach given that they are taught how to participate in active and analytical classroom discussions. However, through active learning techniques provided by the professor, students can also benefit from "orientation model" approach by incorporating topics of social and academic change into these discussions. A question remains how instructors can embed these transition and change topics into the academic content discussed in the classroom.

Peer Interactions. Many peer relationships originated in the FYS classrooms by bringing together students with similar interests. Students appreciated that they could meet other peers from outside their academic majors as this widened their networks of friends. For example, one participant said "I definitely think it was a good thing to have a FYS because now, even walking around campus, seeing a familiar face that you know is comforting than other people that you don't know in class." Institutions promote the ability to meet friends in these FYSs which, when successful, may indirectly increase campus retention. However, further research is needed to identify the quantitative contribution that peer interactions and friendships make in student retention decisions.

A comfortable learning environment was created when the same peers were in multiple classes because students were more likely to participate and express their opinions. Many of these friendships continued outside of the classroom allowing first-year students to feel a greater sense of familiarity and confidence, even just by seeing a friendly face around campus. These students no longer felt alone in this new environment after forming these friendships. Findings support the opportunities for learning-community and residence-life community-based FYSs as had been utilized in the past at our institutions and are commonly used at other institutions (National Resource Center for The First-Year Experience and Student in Transition, 2013).

Many participants expressed how the use of group projects and in-class activities in their FYSs taught them the importance of teamwork and also gave them the opportunity to build relationships with their peers both in and out of the classroom. Linked to teamwork, participants appreciated attending classes (specifically mentioning their FYSs) in which all classmates were first-year students. They were less intimidated and felt equal in ability to their peers in these classes, allowing them to feel comfortable with sharing their ideas and asking questions. This contribution to the self is shown in this quote from a participant "It helped me build my confidence more, like going into class I felt like I could meet new people and express myself better and stuff like that, instead of like hiding behind a book or something." The ability to relate to one another during a potentially stressful college transition builds friendships and community within the college campus (Smith, 1993). Sharing similar transition experiences in the classroom may prove an important addition to FYS faculty development training. Through examples and personal experiences, faculty may be able to address similar experiences that students are struggling with, such as failing their first exam, the importance of class attendance, or roommate disagreements.

Communication Outside the Classroom. Communication outside the classroom involved the use of technology and personal interactions with professors and other students that enhanced the college experience. Effectively using Blackboard and the syllabus as tools outside the classroom also helped students remain conscious of assignments and class material, and it enabled the development of independent learning and organizational skills. One student had this to say about Blackboard, "If you miss a class it makes it a lot easier to get caught up because everything you need is on Blackboard, like your professor might post their notes, or with my blog for my English class. If we missed something in class we knew what we were going over every class, so it definitely puts more focus on independent learning than I had in high school with having everything there for me and having a syllabus." These resources seem to reinforce the independent time management skills required for college success. Highlighting the benefits for Blackboard reminders and detailed syllabus content in training programs is important as FYS instructors are often teaching college-level academic practices, while other instructors may expect these skills entering the classroom. Although participants did feel comfortable asking their professors questions outside of the classroom (i.e., email or office hours) as the semester progressed, they reported that some questions were more appropriate for their residence life aides or upper-class students. The experienced student perspective that only experienced students can provide often helped these first-year students in their adjustment to college life.

Conclusions

The findings of the focus group were, first and foremost, a clear statement concerning the benefits of collaboration between faculty to assess interdisciplinary programs, as well as the value of having undergraduates do much of the work of qualitative assessment. The report and information provided were professional, thorough, and provided much valuable information to help program leaders better understand a sprawling program defined by freedom and flexibility.

For faculty teaching FYSs, some of the results might be surprising. Most importantly, students in the focus group articulated the value of academic rigor within the FYS. Within the classroom during the first semester, students may signal to faculty that they resent hard work. However, with the benefit of a few months hindsight, students could see the value to high standards within the FYS. In addition, faculty who struggle to generate discussions within a seminar environment in the FYS might be surprised to discover that students appreciated group projects, team building, and class discussions. Students also appreciated explicit instruction on how to do various types of assignments and on expectations new to them in the college setting, from seminar discussion to poster presentations. It is recommended that FYS faculty find a balance between high standards and guidance as students navigate the expectations of college-level courses. It is our view that first-year students need to be initially taught these expectations, ideally in an FYS, for greater success in other college-level courses. The results of the focus group are a reminder that, for students, their experiences are not so neatly divided into "orientation" or "academic" in their FYSs; students find great value when both are joined in the FYS setting.

Finally, the focus group findings demonstrate and confirm the enormity of the transition from high school to college. At our institution, students are unlikely to voice their fears and lack of confidence, and, when directly asked by their professors, they might be likely to reply that everything was fine as a way to avoid the question. Within the setting of a focus group run by students, where questions and answers can have more depth and follow-through, we can see our students' aspirations, successes, and challenges more clearly. Institutions and faculty should take time to receive feedback from students, beyond standardized evaluations, when modifying and assessing their curricula. In an institution with limited resources of both time and money, focus groups such as this are indispensable in the process of determining the vision and focus of the program.

The focus groups also pointed to some issues that are less easily solved. Embedded in the FYS model at our institution is flexibility for faculty members. While there are shared goals, there is not a shared curriculum of either academic or orientation-type skills and knowledge. While this model allowed students to see and appreciate their professors' passion for their topic, it also meant that there was great variation in students' FYS experiences. As a crucial course within the general education requirements, FYSs also struggled with a general student disdain for courses that were not part of their major. While not all students come to college knowing what they want to do, at our institution we have a large number of students who arrive on campus having chosen their majors and who see the value of college in achieving a professional career aligned to their major. As a result, because FYSs do not tend to align with major course requirements, some students see them as frustrating or even useless. In some instances, students may have had an awakening about the value of general education courses within the more intimate setting of an FYS, especially those FYSs that explicitly succeeded in making connections to the students' interests and experiences.

The focus groups also showed that the goals of the FYS faculty training were beginning to be incorporated into the seminars, and when students saw them in practice, whether as seminar discussions, integration of academic and orientation models, efforts to engage the whole student, or explicit instruction on the hidden curriculum of college, they appreciated these practices. However, these goals and practices were not yet being universally incorporated into FYSs, which speaks to the need to offer consistent training each year and to create opportunities for FYS faculty to join together and discuss assessment results. It bears repeating that at our institution faculty teaching FYSs are drawn from across the university, including multiple departments, staff, full-time faculty, and adjunct faculty. Discussions among such diverse parts of the college community, while difficult to schedule and organize, are well worth the effort.

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Websites Related to Teaching and Learning

— Kayla Beman

" Currents Clips and Links" is a list of links to interesting, non-commercial websites related to teaching and learning, compiled by Kayla Beman. Currents invites reader recommendations of similar sites that they've found useful.

University of Vermont: Center for Teaching and Learning is based out of the University of Vermont and features a variety of teaching resources for faculty and professors. The Center for Teaching and Learning website provides links to information on designing syllabi and online learning courses. The website also features resources for enhancing learning when teaching multilingual and international students along with information addressing universal design for learning. http://www.uvm.edu/ctl/

Berkeley Center for Teaching and Learning is based out of the University of California Berkeley and provides resources for faculty and professors that are organized according to the processes of teaching and learning: learning, designing, engaging, improving, assessment and evaluation, and documenting teaching effectiveness. The Center for Teaching and Learning website features links to information regarding a variety of topics such as designing a course, developing writing assignments, leading class discussions, and evaluating written work. Of note, the website also contains a blog with postings on topics of interest, such as making office hours more effective, thinking as teaching, and the digital learning experience. https://teaching.berkeley.edu/home

Amherst College: Center for Teaching and Learning is based out of Amherst College in Amherst, Massachusetts and has a section on their website dedicated to teaching resources for faculty and professors. In the teaching resources section, faculty and professors will find an A-Z Resources tab, which lists a variety of topics such as assessment, course design, grading, and managing crisis in the classroom. The website also features the Center for Teaching and Learning Resource Library, which contains links to published works addressing topics of interest related to teaching and learning. https://www.amherst.edu/offices/center-teaching-learning

University of Pennsylvania: Center for Teaching and Learning is based out of the University of Pennsylvania in Philadelphia, Pennsylvania. Their website features sections on teaching practices and strategies and resources for teaching. The teaching practices and strategies section contains information on inclusive teaching and literature on effective teaching practices with links to articles and additional reading material. Of note, the website also features information on writing a clear syllabus and provides examples of sentence prompts that can be used when writing classroom policies in a syllabus. https://www.ctl.upenn.edu/

Marymount University: Center for Teaching and Learning is based out of Marymount University in Arlington, Virginia. Their website features sections regarding student accessibility and miscellaneous faculty services and resources for teaching and learning. The Center for Teaching and Learning also provides information regarding Universal Design for Students with links to handouts, which address how to make courses accessible to students. The website also contains resource tabs within the faculty services and resources section that address a variety of topics such as understanding and motivating students, course planning and preparation, teaching and assessment techniques, and using instructional technology. https://www.marymount.edu/Academics/Services-Resources/Center-for-Teaching-Learning

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