INNOVATIONS IN TEACHING & LEARNING

INAUGURAL PROCEEDINGS OF THE PEDAGOGICON: 2017

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Introduction to the Inaugural Proceedings: The 2017 Pedagogicon - Innovations in Teaching and Learning

Russell Carpenter, Charlie Sweet, Hal Blythe, Matthew Winslow, & Shirley O’Brien
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As we were coming up through the academic ranks, we always had someone—be it a chair, an officemate, a mentor, or a senior professor—who showed us the ropes and how to make them easier to climb. Part of the responsibility of those who have established themselves in a field, then, is to assist those who come after them.

The major reason that we have linked the Pedagogicon to these published proceedings is the fulfillment of that responsibility. In Scaling the Scholarship Mountain, Sweet, Blythe, Carpenter, and Phillips (2017) asserted that “Becoming a scholar is like following a well-worn path to the summit, learning from those who have walked the path before” (p. 27). For too many beginning scholars, presentation at a conference is both a beginning and an end rather than a step toward the top of Scholarship Mountain. Too often these scholars put a lot of effort into the conference presentation, feel satisfied, and simply list it on their bibliography. Presenting at a conference necessitates a lot of effort, so why stop there? With a bit more work, most conference presentations can (and should) be transformed into publishable manuscripts.

This collection provides presenters from the May 2017 Pedagogicon, held at the Crabbe Library on Eastern Kentucky University’s campus, with an opportunity to turn their effort into that next level of scholarship, a published article focused on valuable pedagogical approaches using the Scholarship of Teaching and Learning (SoTL), defined as “the study of teaching and learning and the communication of findings so that a body of knowledge can be established” (Bishop-Clark & Dietz-Uhler, 2012, p. 1).

Some of the manuscripts selected for inclusion began as 40-minute presentations, while others started out as research posters. The authors in this collection build on their presentations in important and scholarly ways to share these current strategies with you. Every manuscript passed through many mentored drafts. Puritan poetess Anne Bradstreet once compared her poems to birds not quite ready, but despite being imperfect having to leave the nest. The manuscripts accepted for inclusion represent teaching and learning approaches—in varying stages of development or implementation—of value to scholars on many different campuses, many ready for you to implement or adapt on your own campus.

We encourage our scholars herein to keep ascending the Scholarship Mountain. When they reach the top, they can look back and see this publication as one of their trail markers. We encourage you to read these articles closely. Hopefully, you will learn as much as our own scholars.

The 2017 Pedagogicon conference theme was Innovations in Teaching and Learning. This theme encouraged presenters—and thus authors—to examine and promote those strategies for teaching and learning that engage new and forward-thinking approaches. Threads included:

- High-Impact Educational Practices;
- Use of technology to enhance teaching and learning;
- Creative instructional techniques that engage students in learning, especially deep learning;
- Innovative faculty development initiatives, programs, and processes;
- New ways to use SoTL to enhance teaching and learning; and
- Ways to incorporate diversity into teaching and learning.

The manuscripts are organized into sections focused on the following topics:

- Student Learning Strategies,
- Online Strategies,
- Technology and Tools,
Innovations in Teaching and Learning: Inaugural Proceedings of the Pedagogicon

We see these threads as working independently and collectively to represent the important—and innovative—concepts and strategies shared at the 2017 Pedagogicon.

Student Learning Strategies

The manuscripts in this section divide into two distinct but related areas: strategies for promoting deep learning and surveys that assess factors impacting student success and student perceptions of teachers’ approaches to improving the quality of their instruction. Wolman and Rockwell investigate student perceptions of their use of the Continuous Quality Improvement process to allow students to offer feedback throughout the semester concerning their teaching strategies in “Student Perceptions of the Effectiveness of Continuous Quality Improvement Feedback in Lower- and Upper-Division Courses.” In “Beyond the Study Guide: Active, In-class Approaches to Help Students Improve Information Review and Recall,” Shemberger tackles the daunting task of students preparing for exams by offering several interactive, in-class test-review approaches, including connecting to material using social media and creating effective flashcards. She makes a strong case for these strategies not only improving student recall but also helping instructors create more “exam-worthy questions.”

In their informative “‘But I Studied for Seventeen Hours Last Night!’: Exploring Alternative Predictors of Student Achievement,” Joyce and Joyce share some surprising results from a study designed to investigate predictors of final course grades in a large introductory psychology course. All three articles provide transferable SoTL material that can be of value in courses and faculty development programming from all areas of higher education institutions.

Online Strategies

The section on online learning strategies presents basic pedagogical discussions alive on higher education campuses. Civility is at the forefront of conversations focused on engaging classrooms.

Technology and Tools

In this section, the authors address the rapid changes taking place in technology and the impact on teaching and learning innovations. In “Interactive Video Quizzes to Enhance Student Learning,” Hayden, Fleischer, and Taylor analyze video-embedded questions that, through their experience, are shown to promote student learning. Hayden and Fleischer focus on improving student interaction with learning materials, emulating, as they explain, one-on-one tutoring. Next, Harrelson, Stubbs, and Stubbs examine ways to engage students in the classroom through interactive technologies. Then, Ashby, Frozensa, and Peerce provide a review of the benefits of new media projects in writing classrooms and discuss findings in light of their innovations among basic writing students. In “Tabletop Games and Creativity in the Classroom: Reflections from the 2017 Pedagogicon,” Hensley and Winter explore ways that we might facilitate the development of adaptability and creativity through the use of tabletop games. Then, Turner proposes a framework and discussion aimed to engender meaningful learning through the three pillars of sustainability and digital processes to positively impact 21st-century educa-
tion. In “Community of Practice: Creating Authentic Activities for Meaningful Discussions in Online Courses,” Gremp and Nestmann examine ways in which the community of inquiry model highlights the importance of student engagement in meaningful interactions as instructors and students navigate course content. Finally, Ralston and Morin discuss the enhancement of student employees’ learning through an analysis of a new hybrid training platform, DECK (Developing Excellence in Consultant Knowledge) based on faculty development initiatives at their institution.

Inclusive Excellence and Culturally Responsive Pedagogy

At the editors’ home campus, inclusivity, diversity, and equity are central themes across faculty development initiatives. Campuswide discussions of innovation include new approaches for involving stakeholders in teaching and learning. Faculty have focused on developing new understandings and approaches for reaching all students. The contributions in this section provide perspectives of value that are ready for implementation in a variety of classrooms.

In “Gender Inclusivity and Professional Language Usage in the Classroom,” Ralston and Day examine approaches and considerations for incorporation of gender-inclusive language in teaching and learning. Ralston and Day explain that gender is dynamic and that, increasingly, students are identifying as non-binary genders. Exclusive language creates challenges—and even barriers—for teaching and learning in the classroom. This contribution provides options for instructors to consider in their own teaching. In “Using Film to Teach Diversity in Higher Education: Stimulating the Affective Processes of Learning,” Elliott and Sommer present the benefits of experiential learning by illuminating the use of film as a pedagogical device. In their teaching and learning practices, film allows the authors to promote diversity education in their classroom.

Connecting Student Learning and Effective Teaching

Sometimes small additions to our pedagogy make major differences. Some innovations can be massive and all-encompassing approaches to our teaching, but other times simply looking at what we wish to accomplish from a slightly different angle provides that ounce of creativity that deepens student learning and makes us more effective teachers.

Busekrus provides a fascinating antidote to students’ predominantly negative attitudes toward the literature review process. If we are to transform our students into scholars, then we must help them master the literature review or, as other fields call it, the review of criticism. Busekrus taps into a pop culture medium, the script found in movies and television, as a vehicle for not only improving attitudes about the literature review process, but also deepening students’ understanding of what a good literature review is supposed to accomplish.

Chen, Bradford, Lusby, and Fornash offer an even smaller tool for enhancing student learning and performance. Using the in-class small-group format, a pedagogical tactic that has become synonymous with active learning, has a positive effect on student learning. The authors’ study demonstrates the value of diversity in learning by showing the positive effect gained by constituting the groups with students who have contrasting persistence scores.

Finally, Smothers offers something different with an old-fashioned “call to arms” about a very contemporary idea. Every discipline has its own version of “the paper.” Generation Z students are now entering higher education, and if some studies are to be believed, they are spending over five hours per day online with social media and their computers. Yet, when we ask them to write, we assign the traditional term paper, a form that seems to have been around since Gutenberg’s press. As a result, we do not ask them to perform at an online level they have reached. Professional development training in possible assignments and concomitant rubrics become a necessity for faculty.

Conclusion

The editors of the inaugural proceedings of the Pedagogicon approach innovations in teaching and learning from different—but related—perspectives. Importantly, we celebrate and respect the ways in which our fields—Psychology, Occupational Therapy, and English—value and promote those classroom practices that allow for deep learning experiences among students. The editors also
prioritize collaborative time to explore new, even provisional, teaching approaches that stand to enhance student learning. We think of those practices as some of the most innovative on our own campus and beyond.

Readers approaching the proceedings will find a similar passion for innovative practices in the contributions featured here. The authors also come to innovation through different disciplinary, educational, and philosophical approaches. Readers will see, though, that authors are encouraging us to push the boundaries of our own comfort levels—one way to define innovation—for the advancement of learning among our students.

References

Acknowledgements
The editors wish to thank the authors of the inaugural proceedings of the Pedagogicon for their dedication to seeking and sharing innovative approaches to teaching and learning. Thank you to the many excellent presenters at the 2017 conference for sharing their scholarship of teaching and learning with us and allowing us to learn from their work. We wish to acknowledge the Faculty Innovators at EKU for their commitment to the enhancement of teaching, learning, and faculty development across campus. Also, we wish to acknowledge our sincere appreciation to our colleagues and friends in the Crabbe Library for providing inspiring and creative spaces within which to coordinate innovative teaching and learning efforts such as the annual Pedagogicon. Finally, we wish to acknowledge Leslie Williams, in the Noel Studio for Academic Creativity, for her thoughtful comments during the editorial process.
Student Perception of the Effectiveness of Continuous Quality Improvement Feedback in Lower- and Upper-Division Courses

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Continuous Quality Improvement enhances classes by immediately identifying problems, implementing corrective action, and evaluating the results of changes. To accomplish these goals in several Emergency Medical Courses at Eastern Kentucky University (EKU), students are provided the opportunity to anonymously provide feedback through a Continuous Quality Improvement survey at midterm, after every exam, and at the end of the course. This feedback is utilized in-course to make immediate positive changes to the instructional methodology. Students’ perceptions of this Continuous Quality Improvement tool and their ability to provide feedback are measured using surveys of lower-division and upper-division students. Results of this study are presented along with analysis of survey and future directions to explore.

Introduction

Continuous Quality Improvement (CQI), an approach to quality management developed by Deming (1986) in the 1940s, utilizes traditional quality assurance methods by emphasizing the organization and systems. CQI employs a set of concepts, principles, and methods developed from quality principles and contends that everything can be improved. CQI focuses on the “process” rather than the person and identifies all stakeholders, both internal and external. Further, CQI requires objective data to analyze and improve any program by identifying problems, implementing and monitoring corrective action, and evaluating results. CQI principles have been very effective in manufacturing, and more recently healthcare and education along with other service industries (Graham, 1995).

To utilize this process in two Emergency Medical Courses at EKU, we provided students the opportunity to anonymously offer feedback through a CQI tool at midterm, after every exam, and at the end of the course. This feedback was utilized to make in-course corrective changes to the instructional methodology and provide the best possible experience to students. However, the tool itself may need revision for maximum effectiveness. To this end, the students’ perceptions and opinions of the tool and ability to provide feedback were measured using a survey about the CQI tool itself rather than course content. Results of this study are presented.

Overview of Concept

Learning outcomes, student experiences, student feedback, and continuous quality improvement (CQI) are not new concepts in higher education. The use of student evaluation of teaching surveys (SETS) dates back to the 1920s (Mau & Opengart, 2012). Most colleges and universities in the US utilize some form of SETS for raises as well as promotion and tenure of faculty (Avery, Bryant, Mathios, Kang, & Bell, 2006; Mau & Opengart, 2012). SETS can be used for both formative and summative purposes.

A large amount of research on student evaluation surveys exists. Early research focused on validity and reliability. Research results vary widely from outcomes and faculty opinion on the utility of student evaluations. Aleamoni & Hexner (1980) found that faculty are divided almost equally in the utility of student surveys. The responses ranged from “reliable, valid, and useful” to “unreliable, invalid, and useless.” A 2014 study suggests that student evaluations may measure and motivate poor teaching. In this study, comparisons were
conducted between evaluations of introductory courses and academic performance in secondary courses (i.e., Chemistry 101 to Chemistry 102). The study concluded that professors whose students had achieved better grades in secondary courses were associated with lower student evaluations (Braga, Paccagnella, & Pellizzari, 2014). A University of California-Berkeley study suggests that SETS are nothing short of a “popularity contest.” Research further suggests that some SETS are easily manipulated to reflect desired outcomes, positive or negative. Faculty concerns over poor SETS can “stifle pedagogical innovation” (Stark & Freishtat, 2014). Higher SETS have been associated with higher grade expectation, male and younger instructors, female students, elective courses, and smaller class size (McCann & Gardner, 2014).

Other issues of SETS include the frequency and timing of the evaluation(s). Often the evaluation is administered near the end of the course. The results are available to the faculty member only after the end of the course and sometimes not until mid-terms of the following semester. Questions may not be applicable, but receive a neutral response. For example, one question may cover the faculty member’s availability during office hours. Many students will not meet with the faculty member, but rate the item as neutral, causing lower averages. Some studies suggest that daily feedback would be better for making formative changes.

Lastly, some students believe that their opinions don’t matter because faculty do not modify course delivery or methodology based on SETS (Dommeeyer, Baum & Hanna, 2002). If the students are not provided with the usefulness of the SETS or the fail to visualize substantive changes based on SETS information, the students will terminate providing meaningful data (Chen & Hoshower, 2003). Winchester & Winchester (2012 & 2014) report that SETS respondents did not believe they would benefit from the SETS, but future students may benefit. Further, students may feel compelled not to complete SETS. Students, sometime question the reasoning of the survey since they don’t often perceive benefit from their responses. To this end, a gap in research literature related to the students’ opinion of CQI surveys exists, especially with their usefulness or changes made in the CQI process.

For our study, we decided on the PDCA (Plan, Do, Check, Act) Cycle as it is the most widely used and well-researched CQI methodology. PDCA also works well with small sample size (i.e., several classes) and few variables and is easily applied in an educational setting. In higher education today, the check stage of the PDCA Cycle is primarily performed by student evaluation of teaching surveys. However, in order for a CQI initiative to be successful, the process needs to be focused and feasible (Barzansky, Hunt, Moineau, Ahn, & Lai, 2015). The fundamental purpose and outcome of any CQI initiative is to provide superior products and/or services and an unparalleled level of customer satisfaction (Berwick, 1989).

### The Study

The purpose was to examine students’ perception of the usefulness of the SET. Students were surveyed in EMC 205 Prehospital Management of OB/GYN Emergencies (20 respondents), EMC 225 Introduction to Pharmacology (15 respondents), and EMC 450 Disaster Medical Operations (36 respondents). The courses were all taught by the same

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<thead>
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<th>Table 1: CQI Survey tool Likert-scale questions</th>
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<td>1. The learning objectives for this course are defined.</td>
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<td>2. Course activities/assignments are related to the course objectives.</td>
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<td>3. The professor is well prepared for class.</td>
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<td>4. The professor is available during posted office hours or by appointment.</td>
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<td>5. Feedback on my work is timely, constructive, and enhances my learning.</td>
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<td>6. My grades accurately reflect my learning in this course.</td>
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<td>7. The professor creates an environment where diverse viewpoints can be freely expressed.</td>
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<td>8. Based on my experience in this course, I would recommend this course to other students.</td>
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<th>Table 2: CQI Survey tool open-ended questions</th>
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<td>1. What is/are the valuable aspects of this course?</td>
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<td>2. What is/are the least valuable aspects of this course?</td>
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<tr>
<td>3. Please provide suggestions for improving the course.</td>
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<td>4. Please provide any additional comments.</td>
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full-time faculty member. The survey tool used in these courses asked 8 Likert-scale questions on a scale from 1-7 and had 4 essay questions, as shown Tables 1 and 2. Based on the results and feedback of the survey, the professor modified classes to include more small group in-class assignments/discussions, change in topics for future discussions, and required fewer assignments but more depth and breadth to the remaining coursework.

To evaluate the survey tool described above, students were asked to respond to the five statements shown in table 3. The results of the survey of lower-and upper-division courses are shown in figures 1 and 2.

The Results

The majority of respondents indicated agreement or strong agreement for each question. It is interesting that the lower-division had a stronger tendency to select “Neither agree nor disagree” than the upper-division course. In the lower-division course, 51% of students selected “agree” or “strongly agree,” and 36% of students responded “Neither agree nor disagree,” whereas in the upper-division courses, 76.2% of respondents selected either “agree” or “strongly agree,” and only 20% of students responded “Neither agree nor disagree.” In the authors’ opinion, statement 3 and 4 are the most
important parameters to examine as the purpose of the CQI exercise is to improve students’ learning and their experience in the course. In the lower-division courses 57.3% and 57.2% of students indicated that the changes implemented based on the survey enhanced their learning and experience respectively. Similar positive results were found in the upper-division course, where 77.8% of students indicated that the changes implemented based on the survey enhanced their learning and experience.

Table 3: Survey Questions

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Discussion

Although the validity, reliability and usefulness of SETS has been debated in the literature, this study examined students’ perception of the usefulness of frequent in-class course feedback. Student survey results showed that students found the CQI surveys used in class to be useful and enhanced their experience in the class. The study authors postulate that the frequency of course feedback (in this study 3-4 opportunities per course) and students being able to directly observe and benefit from course modification(s) resulted in a better classroom experience and positive students’ perception of the CQI survey.

Conclusion

Based on student responses, the information may be useful for administrators to establish trends, modify courses, and/or change the timing of SETS. In this sample size, upper-level courses viewed the feedback as more positive than lower-level courses. Further research is warranted since the process is transferable and could be appropriate across disciplines.

References


Beyond the Study Guide: Active, In-class Approaches to Help Students Improve Information Review and Recall

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Using class time to help students review course material before an exam can be effective for both the students and instructor. This article discusses successful, interactive test-review approaches to help students know the information better. Examples include having students connect to material using social media and guiding them to learn how to use flashcards the right way, among others. These active-learning approaches can help fill in the gaps with information that students might not have grasped from project-based experiences.

Introduction

Studying for course examinations can be daunting for college students, even when the information was acquired first through constructivist activities or after a study guide with major concepts was given. Taking class time to review material can be effective for both students and instructors. Successful, interactive test-review approaches help students know the information better. Connecting to material using social media and flashcards the right way, among other approaches, can help fill in the gaps with information that students might not have grasped from project-based experiences.

This article focuses on successful test-review approaches that can help faculty plan effective in-class test-review sessions and design exam-worthy questions. These approaches are simple and innovative to certain degrees; they offer either new perceptions toward existing ideas or involve technology that enhances traditional methods. College and university faculty might find one or more of these test-review methods as new ways to use scholarship of teaching and learning (SoTL) to improve their teaching and student learning.

Context of Test Reviews

Research that specifically examines the preparation a student makes to demonstrate knowledge and improve achievement is sparse, although findings in studies on improving student achievement have shown that computer engagement and computer-based instruction can be used to improve student outcomes (House, 2012). Yet, the relationship between preparation and performance is fascinating, and questions about the ways in which students prepare to show competence need to be addressed. In The Freshman Year Experience: Helping Students Survive and Succeed in College, Upcraft and Gardner (1989) promote “exam preparation” as a basic component of the first-year college curriculum (Britton, Burgess, Martin, McLeod, & Rosen, 1975, p. 109). In 1980, more than 100 “how to study” books were published (Main, 1980). Students now have access to the internet and other digital methods to search for books, articles, tips, and other content that can help them with preparation and recall.

However, several reasons support in-class test reviews. First, course exams are popular, valid indicators of student achievement. Because of the importance or weight placed on exams, having a structured review session can help the student reduce any test anxiety and build confidence. Second, planning test review sessions can help the instructor design exam questions with greater clarity and meaning. Third, interactive test review sessions can enhance the main points of the curriculum for students. Fourth, students have a chance to test themselves through in-class test reviews. Fifth, in-
class test reviews can help students prepare better for material in other courses.

To understand better the importance of in-class test reviews necessitates an explanation of how this approach fits in a framework that involves the concepts of learning and student engagement. First, learning is a dynamic process that consists of making sense and meaning out of new information and connecting it to what is already known. To learn well and deeply, students need to be active participants in that process; they must do something (Barkley, 2010, p. 94). The ability to store, retain, and later retrieve information is fundamental to learning. “Remembering” is the first level in the revision of Bloom’s Taxonomy of educational objectives (Anderson, Krathwohl, & Bloom, 2001).

Second, student engagement leads to learning. Student engagement is “a process and a product that is experienced on a continuum and results from the synergistic interaction between motivation and active learning” (Barkley, 2010, p. 8). Therefore, active learning means that the mind is actively engaged (Barkley, 2010). In terms of learning content, students are more likely to remember material in which they have made an emotional investment or connection (Barkley, 2010). Research on retention shows that if a student can remember the information after 24 hours, a greater likelihood exists that it is in long-term storage; if a student cannot remember the information after that period, it most likely will not be retained (Barkley, 2010, p. 101).

Three domains of learning are central to this discussion. Learning activities will be most successful if students are engaged on a cognitive level (students are thinking about what they are doing), an affective level (students enjoy what they are doing and give it their full attention) and, when possible and appropriate, on a psychomotor level (students apply the theoretical and abstract by doing a physical activity) (Barkley, 2010). While all three domains are not required simultaneously for active learning to occur, learning environments that integrate more than one domain are most effective and engaging.

In test-review sessions, a learner-centered approach is key. In a teacher-centered approach, a core dimension is to help students build a knowledge base, which usually involves students memorizing the content. By applying a learner-centered approach to test-review sessions, the instructor encourages students to transform and reflect on most of the content to make their own meaning of it (Blumberg, 2009). This approach does not necessarily mean that test questions are given during the sessions, although, in a few cases, that might occur.

Test-Review Approaches

The type of test-review method will matter for the student. Ayres (1996) found that it is not the amount of preparation but rather the type of preparation that makes a difference. This research supports an earlier finding that suggests preparation strategies will differ based on learning style (Britton, et al., 1975).

Therefore, three active, in-class test-review approaches are proposed in this section: 1. connecting discussion to lesson objectives, 2. helping students use flash cards correctly, and 3. engaging with e-learning platforms. These approaches were selected for two reasons. First, they are simple for both instructors and students to use. Second, these approaches are applicable to the teaching and learning concepts discussed. The author has used these methods in courses and observed academic improvements among students overall. Students—through informal conversations and course evaluations—expressed appreciation for these approaches.

1. Connecting Discussion to Learning Objectives

A learning objective (LO) helps instructors decide what lessons and content they want their students to know or do at the end of the class or course. LOs specify the intended learning outcomes and focus on student performance, using action verbs—list, describe, report, compare, demonstrate, analyze—to indicate the behaviors that students are expected to perform. The action verb usually corresponds with Bloom’s Taxonomy.

During a test review, instructors and students discuss the content related to the LOs that will be assessed on the exam. The length of time spent is up to the instructor, who then can write test questions that stem from the LOs. Here’s a simple example. A faculty member who teaches a health class might expect students to recall the four major food groups without error. A test question would ask the student to name the four major food groups.
In some instances, as the one mentioned in the above paragraph, questions asked during a test review could appear on the exam. However, here is a more complex example that illustrates the benefit of using LOs for test reviews without giving away a test question. An English or writing instructor has this LO as part of a unit or module: “The students will summarize the main ideas of a story in grammatically correct English.” During a review session, an instructor could revisit the process that students should follow in summarizing content—without giving the exam question. Students who follow the process should be able to respond successfully to any test question that relates to the LO. The test question could be, “Using grammatically correct English, summarize the main events—in three or four sentences—from the below news story.”

2. Helping Students Use Flash Cards Correctly

Flash cards are a traditional study tool that promotes studying through active recall. However, many students use flash cards inefficiently, committing several mistakes when creating and studying flash cards. They make them only for rote learning, a memorization technique based on repetition; create complex cards that fail to promote true recall, leading students to recognize, and not learn, the material; or use flash cards when a different tool or study method would be better. Given these common problems when creating and using flash cards, here are best practices that instructors can share with students when reviewing material for a test.

1. Have students make their own flash cards—on tangible cards. Students often share their flash cards with their classmates or use flash card apps and programs, such as Quizlet, that will allow them to download pre-made decks instantly. However, having students write on flash cards during a test review in class helps them to create strong neural pathways by taking in new information and creating something new with it, in their own words and images. This part of the learning process helps students to retrieve later what they learned. When students use flash cards that they did not make, they often skip the learning process.

2. Combine pictures and words. Students can recall information better by adding pictures to their cards (Wiseman, MacLeod, & Lootsteen, 1985). In cognitive psychology, this is called a picture superiority effect, in which people tend to remember imagery a lot better than they remember words. However, words should not be replaced completely with pictures. A mixture of pictures and words on a card works better than pictures or text alone, enabling a student to recall the information and content.

3. Apply mnemonic devices to connect information. A mnemonic device helps to build a mental association combining pieces of information. For instance, a popular mnemonic is ROY G BIV—the acronym that tells the order of the colors in the visual light spectrum. Rhymes and associative images also make good mnemonics. It’s up to the student to create an association that only he or she would know—another reason why it’s important for students to make their own flash cards.

4. Write one question, one fact, or one term on one card. Students who cram multiple pieces of information on one card will find that they will only recognize the ideas but not be able to recall—or retrieve from memory without an explicit cue—the material competently.

5. Study flash cards in both directions. Students should review both sides of their cards. They could play a version of the television show, “Jeopardy,” in which they must give the correct question to the answer given. By studying both sides of the flash cards, students are strengthening their neural pathways.

3. Engaging With E-Learning Platforms

Online and social media tools can help to engage students in their learning because their world is—and has been—the digital age. Two theoretical frameworks serve as the guiding concepts to explore how e-learning integrates teaching and student learning in the context of in-class test reviews. The first one is Web 2.0 Technologies, which relates to digital innovations, and the second one is connectivism, which helps to examine the application of Web 2.0 technologies in pedagogy and curriculum. Each is discussed briefly.

Web 2.0 Technologies

Web 2.0 is both a platform on which innovative technologies have been built and a space where users can share content (Cohen & Duchan, 2012).
Web 2.0 tools are highly developed, and their role in education is growing (Yakin & Tinmaz, 2013). Encompassing a number of tools, Web 2.0 includes social networks such as Facebook; media sharing, such as YouTube; creative content, such as podcasts, videocasts, blogs, and microblogs; and other content platforms. All have the potential to promote and improve educational processes (Cohen & Duchan, 2012). Tim O’Reilly introduced the Web 2.0 theory in 2005. He noted that Web 2.0 technologies are more oriented to participation by indexing information in the form of tags. Thus, the theory can be viewed as controlling the web through participation with regard to the construction and distribution of information (Siemens & Tittenberger, 2009).

**Connectivism**

Developed by George Siemens in 2004, connectivism is contextualized in a digital era and characterized by the influence of technology in the education setting. This theory stems from the traditional learning theories of behaviorism, cognitivism, and constructivism; however, at the time this theory surfaced, these frameworks did not explore the impact that technology had on learning. Siemens suggests that in the past two decades, technology has restructured how people live, communicate, and learn (O’Bannon & Britt, 2012). Pedagogically, connectivism is observed when students use the technology in the classroom, share information, and establish a relevance to the content as knowledge in a dynamic experience. Learning takes place when cognition and emotions combine in the process. Learners will connect to a network to share and find new information, modify their thoughts based on the new information, and then connect to a network to share these new discoveries and find new material. Learning not only is consumed but created (Siemens, 2008).

Under these two frameworks, social media and online technology have the potential to enhance teaching and student learning. Twitter, one of the most popular microblogging social networking websites in the world, is increasingly used in classrooms. Educational implications for social media are emerging, especially the integration of Twitter into the learning process by forming a community or organizing activities in class (Galagan, 2009). Yakin and Gencel (2013) found that Twitter is becoming popular in learning activities. Information sharing is one function in which microblogging provides opportunities for students and teachers to collaborate and communicate in an educational setting (Ebner, et al., 2010).

For a test-review session, an instructor would post review questions to the students, who then would tweet the correct response with the class hashtag chosen by the instructor. Students can work individually or with groups, the latter especially for those students without Twitter accounts, and they could consult their notes or textbook for the correct answers. By showing the live Twitter stream on a projector screen, an instructor can interact with the students by discussing the content further or clarifying any student responses.

The Twitter test review can be taken a step further by compiling the student tweets into a Storify post that would serve as a digital study guide (Shemberger & Wright, 2014). Storify is a digital curation tool that is used to tell narratives in a digital format with social media posts such as Twitter, Facebook, Instagram, Flickr, YouTube, and web links. If social media tools are not desired for test reviews, games are gaining a growing acceptance in education. One example is Kahoot!, a free online learning platform. The e-learning tool’s real-time feedback provides opportunities for instructors to customize their instruction based on student understanding on quizzes, while the surveys allow for anonymous classroom participation, which further engages all students (Plump & LaRosa, 2017).

**Discussion and Considerations**

Students come to college classrooms today unprepared for academic rigor. Not only are faculty expected to teach their discipline, but they also must prepare students for academic life. Structured test-review sessions conducted during class offer opportunities for both the instructor and the students. Instructors can design more accurate exam questions that relate to the material, and they also can reflect on the weaknesses and strengths of their teaching. Students must work to connect material and study for tests. The methods offered in this article vary in levels of innovative thinking, and an instructor can tailor any of the approaches based on the dynamics and educational levels of the students in course.
Instructors are encouraged to think of other test preparation approaches traditionally used before the digital age to see if these could be revitalized as innovative tactics. Social media technology in particular is becoming more visual; therefore, pedagogy for all grade levels must consider this aspect in a new dimension of visual learning. Research will be necessary to generate solid discussion of how students respond to test reviews. The methods shared in this article can work to engage learners at all stages of education. The author hopes that the ideas presented in this article can chart new creative and critical approaches to teaching and learning—beyond the study guide.

References

"But I Studied for Seventeen Hours Last Night!:
Exploring Alternative Predictors of Student Achievement

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When students drop out of college, they face lower lifetime earnings, and their universities lose tuition dollars and future alumni contributions (DeBerard, Spielmans, & Julka, 2004; National Center for Education Statistics, 1989). Students who earn high grades, however, are less likely to drop out of college (Kirby & Sharpe, 2001). Therefore, the purpose of this study was to investigate predictors of final course grades in a large introductory course. Sixty-nine students reported on work and study habits, homesickness, and temperament. Students also consented to have their academic achievement data (grades and attendance) examined. Results show that neither homesickness nor the number of hours that students study per week relates to final course grades, but that grades do relate to attendance, temperament, maternal education, and hours employed per week. In fact, a combination of these four variables predicts 56% of the variance in students’ final course grades. Interestingly, those living on campus did not have higher grades than those living off campus, though this result may be limited by how few students lived on campus. Results imply that instructors who wish to work with struggling students should consider, in addition to academic concerns, those non-academic factors that could impact student learning.

Introduction

Attrition is a large concern for universities and their students. Currently, fewer than 60% of students complete their Bachelor’s degrees within six years (Velez, 2014). Students who leave college without a degree must face debt while earning less over their lifetime than if they had earned their degree (National Center for Educational Statistics, 1989; Taylor, Fry, & Oates, 2014). Meanwhile, universities lose the opportunity for these students’ tuition, fees, and future alumni contributions (DeBerard, Spielmans, & Julka, 2004; Iskhakova, Hilbert, & Hoffman, 2016). Unfortunately, students are most at risk of dropping out during their first year in college (Cardak & Vecci, 2016). In fact, thirty percent of college freshmen drop out during this first year (Bowler, 2009).

Fortunately, students who succeed in the classroom are less likely to drop out of college than are their lower-achieving peers (Kirby & Sharpe, 2001). In fact, they face a number of benefits. For instance, more engaged students have higher early career earnings (Hu & Wolniak, 2010). There are a wide array of predictors of student success. Much research focuses on the cognitive predictors of college success. From this, we know that ACT score, high school GPA, intelligence, academic self-efficacy, and academic-related skills each predict college GPA (Coyle & Pillow, 2008; Komarraju, Ramsey, & Rinella, 2013; Robbins, Lauyer, Le, Davis, Langley, & Carlstrom, 2004). Similarly, there are many psychological and socioemotional predictors of college success, such as achievement motivation, self-esteem, and the support of parents and peers (Dennis, Phinney, & Chuateco, 2005; Nordstrom, Goguen, & Hiester, 2014; Robbins et al., 2004).

Recently, research has begun to explore the ways in which student personality may impact college student success. The “Big Five” personality model is a widely-accepted model that aims to condense the intricacies of personality into scores on five domains—openness, conscientiousness, extraversion, agreeableness, and neuroticism (Costa & McCrae, 1992). Amongst first-year engineering students, the “Big Five” personality factor of conscientiousness significantly positively predicted reten-
tion (Hall, Kauffmann, Wuensch, Swart, DeUrquidi, Griffin, & Duncan, 2015). Similarly, college GPA positively relates to conscientiousness and agreeableness and negatively relates to neuroticism (see Vedel, 2014 for review).

Still, research examining the associations between personality and student success is very much in its infancy. A dearth of studies in this domain exists. Specifically, there is very little research in which personality characteristics are measured using models other than the “Big Five,” even though this is far from the only model of personality. From a developmental perspective, in which students are growing and developing beings in the unique developmental transition that is emerging adulthood, it makes sense to measure temperament. Temperament is an inborn pattern of emotional and behavioral tendencies, present even in infancy (Thomas & Chess, 1977). Temperament can be measured in adulthood, just as it can be measured earlier in life (Evans & Rothbart, 2007). One aspect of temperament that is particularly relevant to student well-being is inhibitory control. Inhibitory control involves the inhibition of irrelevant thoughts and behaviors (Watson & Bell, 2013). Thus, it could indicate a student’s ability to prioritize academic concerns when temptations arise (e.g., focusing on studying rather than attending an exciting fraternity party). Indeed, such control is a common predictor of childhood academic success (Blair & Razza, 2007). Yet, to the best of our knowledge, no research to date has examined the influence of inhibitory control on success in a collegiate environment.

Furthermore, the limited research that is available to examine the impact of a personality on collegiate success very often focuses on this personality without regard to many other predictors of student success (i.e., Chamorro-Premuzic, 2006; Chamorro-Premuzic & Furnham, 2003; Nguyen, Allen, & Fraccastoro, 2005). Therefore, the purpose of this investigation was to investigate many different predictors of final course grades in a large general psychology course consisting primarily of students in their first semester in college. By examining a unique aspect of personality—-inhibitory control—alongside other predictors of student achievement, we believed that this investigation would provide valuable information about how to support a diverse array of students with a diverse variety of personalities through their first-year courses.

Method

Sixty-nine students (43 women, 25 men, 40 freshmen, 13 sophomores, 8 juniors, 4 seniors) who were enrolled in an introductory psychology course completed a questionnaire packet in which they reported on demographic variables, work habits, study habits, level of homesickness, and temperament. Students also consented to have their academic data (grades and attendance) used in this investigation.

Participation in the study was not mandatory for students, though most did choose to consent. Consent forms were distributed early in the semester by a course graduate assistant. The graduate assistant placed these forms in a sealed envelope that was not opened until after final course grades were submitted so as to prevent any instructor bias to student grades. Students were informed of these protections before deciding to consent to the study.

Demographic variables. Students reported on demographic characteristics, including their sex and year in college. They also self-reported the highest level of education completed by their mother (high school, technical school, college, graduate school, or an open-ended option of “other,” which allowed students to report alternative levels of education). No students chose “other.” Finally, students reported whether they currently lived in on-campus housing ("yes" or "no").

Work habits. Students reported if they were currently employed and then reported, in open-ended format, how many hours per week they worked on average. Students who were not currently employed were instructed to report “0” hours of work per week.

Study habits. Students also reported, in open-ended format, the number of hours that they studied each week for their introductory psychology course.

Homesickness. As a measure of homesickness, students completed the Homesickness Questionnaire (Archer, Ireland, Amos, Broad, & Currid, 1998). This scale included 33 items in which students reported on a Likert-type scale (1 =strongly disagree to 5 = strongly agree) their level of agreement with various statements indicative of their level of homesickness, such as “I can’t concentrate on my work, because I’m always thinking about home” and “I hardly ever think about my home” (reverse coded).
Temperament. Finally, students completed the Adult Temperament Questionnaire (Evans & Rothbart, 2007), which is a measure of temperament in adulthood. Of interest to this investigation were student scores on the 7-item inhibitory control subscale. For each question, students used a Likert-type scale (1 = extremely untrue to 7 = extremely true) to report how true a series of statements was about them.

Academic data. In addition to completing the above packet of questionnaires, participants consented to have their academic achievement data analyzed in aggregate. Of interest to this investigation were student attendance and final course grades. Attendance was recorded at the beginning of each class period, and attendance is reported here as the percentage of class periods for which students were present. Final course grades are reflective of students’ final course averages, based on performance on exams and assignments, in percentage points.

Results

We used bivariate correlations to determine the interrelations of our variables of interest. As can be seen in Table 1, results show that neither homesickness nor the number of hours that students study per week relates to students’ final course grades ($r_s < .22, p_s > .10$), but that final course grades are significantly positively related to their attendance ($r = .73, p < .001$), temperament ($r = .27, p = .03$), and maternal education ($r = .24, p = .05$), and are negatively related to the number of hours that students spend per week in external employment ($r = -.28, p = .02$).

In fact, through multiple regression (see Table 2), it can be seen that a combination of those significant predictors (employment, temperament, maternal education, and attendance), together, predict more than 56% of the variance in a student’s final course grade, $R^2 = .56, F (4, 59) = 18.99, p < .001$.

Finally, an independent samples t-test was used to determine the effect that living on campus had on final course averages (Figure 1). Interestingly, those living on campus ($N=11, M = 83.91, SD = 7.30$) did not have significantly higher grades than those living off campus.

Table 1. Bivariate Correlations and Descriptive Statistics of Final Course Grades and Their Predictors

<table>
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<th>4</th>
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<th>6</th>
<th>7</th>
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<tbody>
<tr>
<td>1. Final Course Grade</td>
<td>--</td>
<td>22</td>
<td>.73</td>
<td>.27</td>
<td>.24</td>
<td>-.28</td>
<td>.05</td>
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<td>2. Homesickness</td>
<td>--</td>
<td>-.11</td>
<td>.10</td>
<td>.04</td>
<td>-.09</td>
<td>-.04</td>
<td></td>
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<td>3. Attendance</td>
<td>--</td>
<td>.13</td>
<td>.36</td>
<td>-.48</td>
<td>.13</td>
<td></td>
<td></td>
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<tr>
<td>4. Inhibitory Control</td>
<td>--</td>
<td>.07</td>
<td>-.03</td>
<td>-.08</td>
<td></td>
<td></td>
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<tr>
<td>5. Maternal Education</td>
<td>--</td>
<td>.15</td>
<td>.03</td>
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<tr>
<td>6. Employment Hours</td>
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<td></td>
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<tr>
<td>7. Studying</td>
<td></td>
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<tr>
<td>M</td>
<td>79.78</td>
<td>73.34</td>
<td>.85</td>
<td>3.73</td>
<td>2.39</td>
<td>4.90</td>
<td>3.01</td>
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<tr>
<td>SD</td>
<td>16.47</td>
<td>19.46</td>
<td>.16</td>
<td>.70</td>
<td>1.24</td>
<td>8.37</td>
<td>2.63</td>
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</tbody>
</table>

Note. *p < .05; **p < .01

Table 2. Results of Multiple Regression Analysis Predicting Final Course Average From Attendance, Temperament, Maternal Education, and Employment Hours

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>$R^2$</th>
<th>F</th>
<th>$\beta$</th>
<th>T</th>
<th>p</th>
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</thead>
<tbody>
<tr>
<td>Dependent variable: Final Course Grade</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attendance</td>
<td>.75</td>
<td>.56</td>
<td>18.99</td>
<td>-.73</td>
<td>7.14</td>
<td>.00</td>
</tr>
<tr>
<td>Inhibitory Control</td>
<td>.17</td>
<td>1.99</td>
<td>.05</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Maternal Education</td>
<td>-.06</td>
<td>-.72</td>
<td>.48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment Hours</td>
<td>-.00</td>
<td>-.00</td>
<td>.99</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Discussion

As faculty members, we have a vested interest in student achievement. We want our students to learn, and we work hard to guide them to success. Students find value in the interactions that they have with faculty members outside of the classroom (Kuh & Hu, 2001; Li & Pitts, 2009), yet the results of the current study suggest that we may do well to change the focus of our interactions with our students. While it is traditional for student-faculty interactions to focus on intellectual, academic, or course matters (Pascarella & Terenzini, 1977), results of this study, importantly, suggest that faculty can best encourage student success by considering both academic and non-academic characteristics of these students.

Results of the current investigation revealed that students’ success relates to factors both inside and outside of the classroom. In fact, students’ final course average positively related to their attendance in the course, as well as their temperament and their mother’s level of exposure to higher education, and it negatively related to the number of hours that they worked per week. Ours is certainly not the first study to link attendance with course success. The connection between these two variables has been shown to relate to student motivation—students who are motivated to attend class are also more motivated to study (Gump, 2005; Zhu, Defazio, Huang, & Hook, 2015). Similarly, it has been well established that students who come from more highly educated families tend to, themselves, be more successful in their educational pursuits (Parcel & Dufur, 2001; Stephens, Hamedani, & Destin, 2014) and that students who work more hours tend to struggle (Carnevale, Smith, Melton, & Price, 2015). Though, admittedly, this last finding is a bit surprising given that, until recently, it was thought that employment for fewer than 20 hours per week was associated with higher grades (Dundes & Marx, 2006).

What is unique to this investigation, though, is its ability to comment on the importance of students’ innate qualities, namely to the temperament trait of inhibitory control. To the best of our knowledge, ours is the first study to demonstrate a connection between inhibitory control and academic success in adulthood. It has been well-established that inhibitory control, the ability to inhibit irrelevant thoughts and behaviors, is important to childhood academic success (Blair & Razza, 2007; Valiente, Lemery-Chalfant, & Castro, 2007), and this understanding has allowed educators to account for individual differences amongst students when providing support to these students. It appears that college instructors should extend this same understanding to their adult students as well. Instructors could help students to recognize when they struggle to focus their thoughts and behaviors on those most relevant to their academic goals—in other words when they struggle to focus their attention on studying in a distraction-filled college environment. In children, it has been shown that practice can improve inhibitory control skills (Diamond & Lee, 2001). It is possible that this situation may be the case in college-aged students as well. More research is needed to clarify if this is the case.

What’s more, the current study provides a unique perspective by demonstrating the importance of inhibitory control alongside other relevant predictors. Together, attendance, inhibitory control, maternal education, and employment hours predicted 56% of the variance in final course averages. Interestingly, even though the regression equation was significant, only attendance and inhibitory control were individually significant predictors. Of course, maternal education and employment were significantly correlated with course grades, so their lack of significance in the regression equation is likely because of overlapping variance between these variables. Attendance and inhibitory control were able to significantly predict student success despite this shared variance. If instructors wish to give a short assessment at the beginning of the semester to identify those students who would be the least likely to succeed, and, therefore, in need of the most support, these results suggest that it may be helpful to include early attendance and inhibitory control in this assessment.

Remarkably, neither student living arrangement, nor homesickness, nor the number of hours that students reported studying each week was predictive of their academic success in the course. It is possible that we saw no impact of homesickness
because of the timing of our assessments—perhaps students early in their first semester of college have not had enough time to become homesick just yet. Regarding living arrangements, institutions often tout the benefits of on-campus living, but recent work shows that living arrangement has little effect on Caucasian students at non-liberal arts universities (Lopez Turley & Wodtke, 2010). This description applies to the vast majority of students in our sample.

Regarding studying, it is possible that social desirability bias encouraged students to over-report their study time, but one would hope that that situation is not the case given that the average amount of self-reported studying was quite low at just over 3 hours per week. Perhaps, instead, the lack of association can be explained by differences in quality of studying. Students with strong study skills may benefit much more from just a few hours of study per week than do other students from twice as much time spent “studying.” In fact, research has shown that the quantity of study can predict GPA only when, first, the quality of the study is taken into account (Plant, Ericcson, Hill, & Asberg, 2005). Future research in this domain should account for the quality of studying to see if self-reported studying could emerge as a predictor of academic success, alongside temperament, under those conditions.

Taken together, the results of this study have important implications for instructors as they work toward helping their students to succeed. Though instructors would often like to believe that their students’ study habits have a strong impact on their grades, it appears that self-reported study time was not the most significant predictor of student success in this sample. Interestingly, though, an impressive proportion of student grades could be predicted by their employment status, temperament, maternal education, and attendance. This relationship implies that when struggling students meet with their instructors, instructors should not only address the students’ academic concerns but should also address these other outside-of-the-classroom characteristics, particularly individual differences in temperament. Doing so may allow instructors to better reach these struggling students and may reduce attrition in at-risk groups.

References


Effective Use of Wikis to Support Engaging Group Work in Online Courses

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Planning group projects and assignments that demonstrate a true group effort and result in student learning can be challenging. Students may have reservations about engaging and participating in group work, especially via online tools such as Wikis. Wikis can be an effective tool used to support collaborative learning in an online course. This article summarizes some of the best practices used in a web-based course to plan for and manage effective online group work using Wikis. Wikis can be used to support quality online course development, allowing the course to meet quality standards and innovative instructional practices. Current literature and cases are noted to outline best practices to support positive and rich learning experiences using Wikis. Pitfalls of using Wikis are noted along with ways to plan for effective and productive online group work using Wikis.

Introduction

Class discussions and group work can be effective instructional practices to support student learning. Planning for group work in an online environment has challenges — specifically for social, culture or access issues that are related to participating and engaging with groups and assignments at a distance.

Kohli and Bradshaw (2011) have defined the term Wiki as “a collaborative website whose content can be edited by anyone who has access to it” (p. 172). To elaborate further, a Wiki is an online tool that allows collaborative contributions and modifications to a set of web pages. All active members of a group have equal access and responsibility for the development and accuracy of the pages within the Wiki site. Wikis can be an effective tool used to support collaborative learning and information sharing among peers. In order for group work to be effective, it is important for the faculty/course developer to 1) establish individual accountability, 2) create interdependence between members, and 3) allow time and provide instructions for weekly responsibilities and progress. For a group project to be successful, it is vital for the course instructor to establish shared goals that can only be met through collaboration. The Wiki tool would support students in achieving this primary goal.

This article will identify the best practices used to plan for and deliver effective group work online using Wikis. A summary of best practices for using Wikis to support collaborative work, sample resources, rubrics and guidelines are noted. This research could have implications for planning faculty development activities which assists faculty in integrating best practices and effective teaching principles for supporting group work via an online environment.

Program Context

On a normal day of class, imagine the instructor walks into classroom and shares the following with the students:

Today class, we are going to begin a new group project that will require each member of the group to be active and available to others in your assigned group. In order to earn a good grade for this project, you will need to document your individual work/contributions and be actively involved in the group’s efforts throughout the time period provided.

Students learning about a new group project that is about to begin in the course may result in one of many responses such as frowns, looks of concern and maybe a few painful groans.

Group projects are known to have challenges including ensuring all group members are equally responsible and active in the progress of the group’s
project. Planning a group project in a face-to-face class certainly does require planning from the instructor and a clear list of student expectations. Experienced instructors may have a list of possible pitfalls associated with group projects. Roberts and McInerney (1997) have summarized seven key problems associated with group work including:

- Problem #1: student antipathy towards group work
- Problem #2: the selection of the groups
- Problem #3: a lack of essential group-work skills
- Problem #4: the free-rider
- Problem #5: possible inequalities of student abilities
- Problem #6: the withdrawal of group members, and
- Problem #7: the assessment of individuals within the groups.

In order to plan for and possibly prevent the seven potential problems associated with group work, instructors and/or course developers who plan to integrate group work in their courses would want to design their course, carefully planning the steps and expectations of the group assignment. Students may benefit from a clear list of requirements and expectations. As expected, there are a variety possible solutions to address the problems associated with group work—but most importantly, a Wiki project could certainly address the problems noted above specifically for online group work/projects.

Overview of Concept

Wikis can be an effective tool to support student learning through collaborative efforts. When Wikis are used for group projects, all active members of a group would have equal access and equal responsibility for the development and accuracy of the pages within the Wiki site.

For students to communicate, collaborate, and learn through a group project requires careful planning and learning how to use the tool. This is especially true for when students are using a new tool, such as a Wiki tool, for the first time. From a student perspective, some may find it helpful to have time to explore and learn how to use the Wiki tool before the actual group assignment begins. A practice Wiki site is one way to support students in this effort. In addition, the instructor may want to provide a brief overview of the Wiki tool and then allow students the opportunity to practice using the tool prior to the group project getting underway.

Group projects, whether completed via a face-to-face class or through an online course, do require careful planning to support students in being able to successfully complete the assignment and meet expectations. Careful planning of group work will help to avoid one or more of the potential problems noted above. When planning for group work, the instructor and/or course developer should plan to ensure three key items are in place including: 1) individual group member accountability, 2) creating interdependence between group members (provide groups a means to contribute, edit, and communicate), and 3) providing both step-by-step instructions and enough time to support students in completing weekly assignments related to the group project.

Group member accountability. In order for a group project to be successful, each individual group member must first complete their own work. This means each member of the group is accountable for some type of research, communication or reporting before the actual group work can begin. In addition, the instructor would need to have a way to check the individual work is complete and provide some form of feedback before the actual group work could begin. Ensuring the individual work is complete first will support individual accountability and ensure all group members are ready to move forward with the active group members and progress with the collaborative side of the project. This type of gatekeeping (i.e., ensuring individual work is completed first) can reduce stress and prevent a student from “riding the wave” of other active and engaged students.

Create interdependence between group members. Once the individual work is complete, feedback has been received, and edits to the individual work has been completed (if needed), then the next phase of the group work would need to include a plan for interdependence between group members. Via the Wiki tool, one way to do this is to require each group member to create a new Wiki page and share their individual work (i.e., copy and paste content to their own Wiki page). Once the individual work is displayed or shared within the group’s Wiki site, then each group member would
be able to read what research or information has been developed by each group member and then begin to add new content to each page. By allowing each group member to create their own Wiki page and provide a foundation, the other members can add to or edit each page freely over a given time period (usually set by the instructor). As edits to each Wiki page is made, the Wiki tool would provide complete documentation of who did what on each page and when – so the assessment of student contributions would be well documented within the Wiki site.

Provide both instructions and time to support students in completing weekly assignments related to the group project. A final key step in planning for group work is providing clear (step-by-step) instructions that promote active learning. Providing instructions may seem like an obvious step in the process of planning group work. However, depending on how long the group project will take (some projects may take multiple weeks to complete) – it is important to note in the instructions each week a summary of what has been completed to date and then the current instructions should focus on the current week’s activities (i.e., explain what part of the assignment students are to complete this week).

Providing written instructions is certainly needed, but the instructor may also want to provide a basic video overview of the weekly instructions. In a few class evaluations, some students have reported the weekly live/recorded web meetings have been very helpful to clear up any questions related to the written weekly instructions.

According to the Quality Matters (2014), specific Standard 5.2 notes that

Learning activities provide opportunities for interaction that support active learning. The annotation associated with this specific standard explains that active learning involves learners engaging by doing something. Active learning entails guiding learners to increasing levels of responsibility for their own learning. (p. 22)

By planning for and assigning group projects, instructors and/or course developers can support the online course in meeting one or more of the Quality Matters Standards, specifically related to general Standard 5. Providing weekly instructions (verbal and written instructions) can support students in remaining engaged in the group project, as well as support students in knowing what is needed or required by each group member in a given week.

Analysis

Benefits of Group Work. Students have reported group work as a valued and engaging learning experience (Dixson, 2010). Dixson completed a study that summarized what types of activities students found to be the most engaging in an online course. In this study, 186 students from six campuses and 38 courses completed surveys on what they found most engaging. Students reported that some activities were highly engaging, including:

- application activities (having to apply the concepts to case studies or problem solving);
- discussion forums about the concepts, labs, and group projects;
- research papers; and
- current events assignments.

Planning and using group projects to support student learning can help students develop skills that are important in the professional world (Caruso & Woolley, 2008; Mannix & Neale, 2005). According to a summary shared on the Eberly Center’s teaching and learning website, “positive group experiences, moreover, have been shown to contribute to student learning, retention and overall college success” (Astin, 1997; Tinto, 1998; National Survey of Student Engagement, 2006).

Planning group assignments and projects can help students to develop teamwork skills and prepare for future employment. Burke (2011) notes that:

Group work has been found to be good for students. Employers want college graduates to have developed teamwork skills. Additionally, students who participate in collaborative learning get better grades, are more satisfied with their education, and are more likely to remain in college. (p. 1)

Properly structured, group projects can reinforce skills that are relevant to both group and individual work, including the ability to:

- Break complex tasks into parts and steps
- Plan and manage time
- Refine understanding through discussion and explanation
• Give and receive feedback on performance
• Challenge assumptions
• Develop stronger communication skills.

Group projects can also help students develop skills specific to collaborative efforts, allowing students to...
• Tackle more complex problems than they could on their own.
• Delegate roles and responsibilities.
• Share diverse perspectives.
• Pool knowledge and skills.
• Hold one another (and be held) accountable.
• Receive social support and encouragement to take risks.
• Develop new approaches to resolving differences.
• Establish a shared identity with other group members.
• Find effective peers to emulate.
• Develop their own voice and perspectives in relation to peers.

The benefits of group work are well noted. However, there are negatives (or pitfalls) associated with group work or team projects.

**Pitfalls associated with Group Work.** While the potential learning benefits of group work are significant, simply assigning group work is no guarantee that these goals will be achieved. In fact, group projects can—and often do—backfire badly when they are not designed, supervised, and assessed in a way that promotes meaningful teamwork and deep collaboration.

**Discussion and Considerations**

When planning group work via an online assignment, consider the following:
• Provide a 1-3 minute demonstration of how to use the Wiki tool including guidance on what resources are available to students via the Wiki group site. Provide a short demonstration or example of how each tool within the Wiki site works (i.e., how to format text, insert a photo and/or video via the Wiki tool).
• Provide a practice Wiki site “before” the Wiki/group project begins. Allow students to practice and learn how to use the Wiki tool before the actual group project begins.
• At the start of the assignment, communicate clear expectations of student involvement.
• Provide a Wiki rubric that explains how the individual group member’s contributions will be evaluated. Clearly explain the student’s grade will be based strictly on the student’s work and this is not a group grade.
• Provide written assignment instructions each week (i.e., to support students in having clear guidance on what to do and when to do it via the Wiki site).
• Within the written instructions, ensure there is individual work/research to be added to the group Wiki site before the actual group work begins.

**Helpful Resources**

To learn more about the values of online group work, access and review some of the following resources:
• Creating a positive environment for online group work: A 15 minute video of group work and plans needed to make group work effective. https://cirt.gcu.edu/documents/teachingtips/promotingapositiveenvironmentforonline-groupworkflv
• A sample Wiki Rubric from the University of Wisconsin (Vandervelde, 2017) is available at: https://www2.uwstout.edu/content/profdev/rubrics/wikirubric.html
• How to use the Wiki tool in Blackboard: Description: 3 minute tutorial of how to set up a Wiki site in Blackboard for students to use via a Blackboard course site. Available at http://ondemand.blackboard.com/r91/movies/bb91_course_tools_create_a_wiki.htm
• Wikispaces—a free Wiki tool available at http://www.wikispaces.com/

**Conclusion**

In summary, planning group assignments/projects in an online environment can be beneficial, but does require planning. The key benefits of using Wiki tools as a way to help students to learn and reap the benefit associated with group projects can outweigh the potential problems. Wikis can be an effective tool used to allow students to demonstrate learning. A Wiki tool can support collaborative
learning, engaged participation and communications between group members. In addition, use of the Wiki tool can provide the course instructor an effective tool to monitor and assess each group member’s contributions, as well as an overview of the final group project.

Wikis, as a possible solution to the problems noted could be sufficient to encourage online educators to take seek out additional solutions and embrace the benefits of group work through online means. As to the benefits and pitfalls of using Wikis in classes, more research is needed to identify and determine effective uses and best practices associated with group projects and using Wiki tools to support collaborative projects/assessments.

References

Strategies to Reduce Incivility in the Online Classroom that Promote an Engaged Learning Environment

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The civility of a learning environment promotes learning and helps students engage without fear of backlash. Incivility in the classroom will have harmful effects to the learning environment, such as a reduction in student participation, a reduction of student satisfaction, and reduction in student retention. An educator must acknowledge that a classroom without any incivility is an unreasonable goal. This article explores strategies for addressing both student and faculty incivility.

Introduction

Incivility in the classroom is a constant deterrent to any classroom, online or face to face. There are many ways to lessen incivility in the classroom, some of which will be discussed in this article. Forni (2003), and author whose works address incivility, stated “A lapse in civility can be anything but trivial when we look at it from the receiving end.” (Forni, 2003, pg. 54)

It is a goal of any educator to have a civil and engaging environment in the classroom. The civility of a learning environment promotes learning and helps students engage without fear of backlash. Incivility in the classroom will have harmful effects to the learning environment, such as a reduction in student participation, a reduction of student satisfaction, and reduction in student retention. To fully understand how to create an environment where engagement is encouraged without the fear of incivility, first one must understand what acts are categorized as uncivil. The facilitator of the classroom must also be able to address any incivility to prevent or at least minimize these acts. An educator must acknowledge that a classroom without any incivility is an unreasonable goal. They, as educators, must make every effort to decrease incivility to the best of their ability. In doing this, faculty will facilitate a learning environment that is positive, promotes learning, and encourages student achievement.

It is important to note that before taking specific steps to reduce incivility, an educator must first take in good course planning and design. Excelling in course planning and design will ensure a learning environment that is healthy and engaging. To excel in this, collaboration is key. Any educator who is planning and designing an online class should receive input from an outside source, specifically from other faculty members and an instructional designer. These “fresh eyes” will help build around strategies already in use in new and creative ways.

Institutional Context

Incivility vs. Civility

Before developing a teaching strategy to reduce incivility, educators should first define the difference between civility and incivility. There are many different interpretations as to what is considered a civil and uncivil action. The definition chosen for this article from Merriam-Webster’s online dictionary for civility is “polite, reasonable, and respectful behavior”, and the definition of incivility is “rude or impolite attitude or behavior: lack of civility. By defining what actions are civil or uncivil informs students to the standard to which they are being held. It is important to provide the definitions to the students before the class begins as introductory materials.

Incivility can result from many occurrences, but often uncivil actions result from a combination of misunderstandings or misinterpretations between students, faculty, or peers. As a result, the educator must realize that there are times when incivility is
not a behavior that is intentional. It is important to recognize the many different forms that uncivil behavior can take. These include but are not limited to: students challenging the authority of the faculty, questioning the credibility or expertise of the faculty, reactions that could be considered hostile, making offensive statements, expecting entitlement or preferential treatment, not meeting deadlines for assignments, taking over discussions, sending emails that are not appropriate, cheating or plagiarizing, and bullying or harassing others (Galbraith & Jones, 2010).

The reasons for demonstrating uncivil behaviors are varied. For example, students may feel entitled because there is a monetary payment to take the class which makes them feel that they are customers instead of students. This mindset can make students feel they deserve an elevated grade because of the payment for the class. Another example of a reason for incivility the individual in question may not have been exposed to civil behavior in the online classroom or past experiences, which leads them to mimic the incivility that they have previously experienced. There is also a sense of being anonymous in online classes, which allows students to act differently than they would in a traditional face-to-face setting. This may be promoted by students who are insecure with online learning. The last example of a reason for incivility is that students may feel uncomfortable when they are taught new thought processes which counteract their previous ideas and thoughts, which may cause the student to rebel against the faculty to regain some sense of personal control (Clark, 2014).

**Overview of Strategy**

The strategy of this literature review was designed to demonstrate the issue of incivility in the online classroom. However, much of the information found could also apply to the traditional face-to-face classroom as well. We concentrated our search to obtain best practices to reduce incivility that in turn would promote engagement from the students. Our search was limited to sound education-themed websites and education-related, peer-reviewed articles to ensure that the information found was current and scholarly. There were two searches at the beginning, with the subject matter of the searches relating to incivility and student engagement. We chose articles based on the information’s applicability to the online classroom. It was important to define incivility and civility to define a baseline understanding of the goal of the article. Of equal importance was to differentiate between incivility of the student and that of the faculty. With these two things identified and defined, we then could obtain information on best practices to reduce these types of incivility and boost engagement in the classroom.

**Student Incivility**

Student incivility is not uncommon and can be reduced in many ways. The first strategy revolves around the syllabus of the course. This is where the faculty can detail the expectations for civility in the online classroom. When detailing this, it is helpful to incorporate the Student Code of Conduct for your institution in the syllabus. Keep in mind that the Code of Conduct is often outdated and does not relate specifically to your online class, so fine detail beyond the Code of Conduct is usually necessary (Johnson, 2012). It is also important to further define these expectations by supplying a handout to the students that defines “netiquette”, which are specific rules on how to appropriately behave online while in the course.

To help reduce students questioning faculty knowledge on the subject matter of the course, it is important to have introductions. Make sure the students know about you and your credentials so that they will know to treat you professionally. It is also important to have the students introduce themselves so that you can learn and relate the subject matter to their lives. Feedback is an essential feature in all courses, particularly in online environments. Be sure you do this often, promoting faculty presence and online engagement. There are many opportunities to do this in the course with such things as assignments, projects, discussion groups, blogs, and such. Set up a timeline for feedback so that the students will know when to expect feedback and don’t feel as though you, as the course instructor, forgot about them.

The most important component of a strategy to reduce incivility is student engagement. Incivility is related to engagement as the more engaged and active a student is in the course, the more civil behavior the student will exhibit (Posner, 2016). It is imperative to engage the students in meaningful
way that will relate the information to them professionally when they join the workforce. These practices to reduce incivility are negated without effective communication. As with any relationship, poor communication leads to disagreements. Discussion boards provide ample opportunity for communication, if structured with reflective thought and opportunities for engagement.

**Faculty Incivility**

Incivility is not exclusive to students. Faculty and/or instructors at times also participate or worsen incivility. A 2016 study by Posner found that the majority of students in an online course felt the person teaching the course was responsible, at least in part, for the incivility that was present in the online class. The faculty member in the same study relayed that she did not have any opportunities for training to handle uncivil behavior in the course, but would be willing to participate if that training were available (Posner, 2016). Faculty incivility can consist of many behaviors as well. These behaviors can include disinterest, snide remarks, trying to humiliate students, making the students feel invalid, retaliation, hostile, partaking in inappropriate emails, superiority complex, holding position and power over students, unrealistic expectations, or threats (to fail or to dismiss). There are many different reasons that faculty display incivility. These reasons affect all faculty, but not all faculty respond with incivility. The most prominent of these reasons is stress. Between deadlines, time restraints, workload, overload, and other reasons, faculty are under a tremendous amount of stress in an average day. There are also other reasons, such as uncivil students or other faculty members, constant change, or just the student’s ability to learn the material in the course. External stressors are also a factor, including such things as publication deadlines, grants, promotion, tenure, etc. External factors also include non-professional issues such as home, work, family, small salaries, financial pressures, or trying to manage and combination of these (Lewis, McVay-Dyche, Chen, & Seto, 2015).

**Ways to Minimize Faculty Incivility**

As with student incivility, there are techniques to reduce faculty incivility. The first is feedback. Faculty need feedback just as much as students. As faculty, you should be asking such things as “How am I doing?” or “What can I do differently?” You could have a mid-term survey, or just use discussion boards to do this. Not only should you ask for feedback, you should listen to and implement if possible, the feedback. Again, communication is essential. Keep the communication professional and exhibit leadership when communicating. Listen to the students when you communicate, and do so respectively. Remember, you are the role model to the students. You must show civility if you expect civility from the students. You must show the students respect and understanding. Doing this will teach students how to be civil when disagreeing, which is essential in an academic environment.

**Analysis**

**Students**

There is nothing anyone can do to fully prevent incivility. When incivility happens, the most important thing you can do as faculty is to respond in a civil manner. If incivility is present in a post from a student, you should delete the post as soon as possible. This requires the faculty member to be present in the online course on a regular basis. Removing the post and communicating with the student is critical in a timely manner, explaining why the post was deleted. If you delay removing the post, there is opportunity that the uncivil post will prompt other uncivil responses. This can snowball into a dire situation, impacting the class culture and learning. It is important if there is an escalating conflict that you immediately refocus the students. If the behavior is between two or more students, the recommendation is that you acknowledge the behavior without acknowledging any one student. You don’t want to single out a student if more students were involved. Then you refocus the students to the content and remind them that they can question the content but no other students. Remind the students that there are multiple perspectives to viewing all topics, and that should be respected, as noted in the netiquette guide. Do not assume that any individual is purposefully being hostile or uncivil, and do not place blame on any one student.

**Faculty**

One of the hardest things to do is to critique your own behavior to identify incivility. The first
indicator that a faculty member is being uncivil is how the students react to the behavior. If a student were to post an apology for a previous post that was perfectly appropriate, that may indicate that the student felt the faculty member was being overly critical. If this happens you need to clarify yourself and strengthen the communication between yourself and the student.

Students should feel included in the online classroom community. To do this, they need to feel connected and to participate in the classroom. (Posner, 2016) They must connect with the faculty of the class to do either of these things. The faculty must be perceived as receptive and friendly on discussion boards and via email. To do this, the faculty must respond to the students whom are off topic in a forum respectfully and redirect them to resources to get them back on track.

Considerations

Engagement from the students is the best way to reduce incivility to provide a better learning environment. As active learning and engagement increases, the instances of inappropriate or uncivil behavior will become less likely. The principles of engagement and active learning will bolster collaboration, motivation, cooperation, and focus in the online classroom. Doing this will make the education more meaningful so that it can be applied to “real life” situations. Faculty should encourage students to apply and practice the things they learn, so that they are active in the learning process and not passive. This will make the faculty members more than the “expert,” as they become the facilitator for learning and engagement. Planning and design are essential to the construction of an online course that promotes civility. Addressing civility clearly in class expectations provides the foundation for a successful online course, promoting an engaged learning environment.

References


Posner, K. J. (2016). Faculty perceptions of online student disruptive behavior (Doctoral dissertation, University of South Florida) [Abstract].
Leveraging Tech to Enhance Learning, Strengthen Relationships, and Introduce Diversity in Online Classes

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The task of transitioning a traditional class into the online environment can often be overwhelming. Instructional designers can help with this process; however, many times faculty are tasked with completing this process alone. By employing a backwards design (Wiggins & McTighe, 2005), faculty can take the focus away from the latest technology craze and place it onto the course content. While a lot of technologies can be used to design the course, these choices should be made after working on the pedagogy. This paper considers pedagogy, a career counseling course example, and technology tips. The purpose of this paper is to provide an explanation of how online courses can leverage technology to fit within a strong pedagogical foundation.

What is Backwards Design?

Wiggins and McTighe (2005) stated that design “is not so much about gaining a few new technical skills as it is about learning to be more thoughtful and specific about our purposes and what they imply” (p. 14). Backwards design is comprised of three steps: 1) identifying learning goals, 2) proof of learning mastery, 3) learning activities (Wiggins & McTighe, 2005). In traditional classrooms, it may be easy to focus on weekly content and dissemination of information. However, faculty may be overwhelmed or excited by technology when transitioning to online classes and allow technology to become the focus of course design. Using a backwards design keeps the content at the forefront when teaching online. While backwards design focuses on the course content, technology still deserves consideration in an online class. Faculty may be tasked with both learning new technologies while simultaneously teaching students how to use the same technology in a course. While technology support may assist students with troubleshooting, faculty still become the first line of communication in instances of technology problems. Therefore, introducing students to the technology they will use becomes a necessary component of online teaching.

Backwards design is extremely effective when attempting to integrate final group projects and assessments into an online course. The concept of identifying the overall goal of the course and acceptable evidence of mastery before considering content covered will help focus the final course design. In this sense, the entire course is designed with the end goal in mind. Through this approach, faculty can integrate teaching content and technology by scaffolding projects and technology seamlessly in a course. Scaffolding is the concept of providing support and direction to assist learners in gaining foundational knowledge that can be built upon as difficulty and complexity increases (Hannafin, Land, & Oliver, 1999). For example, a collaborative final paper could be broken into several assignments throughout the course, rather than being submitted as a whole. These “benchmark assessments” become natural learning checks for students to receive feedback on projects at different stages during the course. Similarly, the integration of online presentations through specific tools can be made less burdensome by incorporating them during the first week. To further illustrate how backwards design can be used when creating an online course, we will address the application to a particular Counselor Education course.
Case Study

Morehead State University offers a master’s degree in school counseling in an entirely online format (Morehead State University, 2017). This case study focuses on one course within the school counseling program. Introduction to Career Counseling is a course required of all school counseling students. However, this course has no pre-requisites and is open to all students in the Graduate School (Morehead State University, 2017). Introduction to Career Counseling provides a review of career counseling theories, technology used in career counseling, a review of research in the field, and a look at the specific career issues of diverse populations. When taught in a traditional format, this course involves discussions, role plays, and multiple opportunities to practice career counseling techniques. Using backwards design allowed the instructor to transition this course effectively to an online environment.

Step 1: Desired Results

The first step in designing the career counseling online course was to identify the desired knowledge and skills of students after completion of the course. This particular course is part of the school counseling program that prepares students to be certified as school counselors by the Kentucky Education Professional Standards Board (2017). The standards for the school counseling programs are derived in part from the Council for Accreditation of Counseling and Related Educational Programs (CACREP) Standards (2016; see Appendix A) and provide the foundation for determining the desired results for the course.

Ask Yourself:
• What are your course objectives?
• Are objectives identified by your program, institution or accrediting bodies?
• What knowledge/skills do you want students to possess?

Step 2: Acceptable Evidence of Mastery

The next step is to determine if students have the knowledge and skills identified by the objectives. Once specific knowledge or skills have been identified through the objectives, the assessment is used to determine level of mastery. In the case study, mastery for the identified objectives was determined by the two assignments listed below. Using two assignments as the main assessment allowed for scaffolding, leading to a larger group project while also determining mastery of objectives at the individual level. Students were given the opportunity to practice and reflect on skills and theories at the individual level before discussing concepts as a group. The two main deliverables used to demonstrate mastery of the course content were an individual project (Phase I) and a group project (Phase II). The individual project was the recording of a role play counseling session that was used in the group project to create a wiki.

Ask Yourself:
• What assignments address the course content and objectives?
• Will students interact?
• What type of assignments do you want to grade?
• Can you identify grading criterion for the final deliverable? (Rubrics or Checklists are recommended for grading!)

Step 3: Plan the Course

Course planning is the final step of the backwards design model (Wiggins & McTighe, 2005). Creation of a weekly or module outline of the course sets the structure for this component of the backwards design process. The outline can organize the course chronologically or topically. The smaller assessments that scaffold to the final project are identified once the outline is finalized. A multi-step, multi-technology approach was used in the career counseling course to best assist students in producing the desired final project. The final project was broken up into multiple steps for each phase. Appendix A provides the alignment between course objectives, module objectives, and assessments.

Phase I. The individual project required students to digitally record a mock counseling session using a multicultural career interview by use of role playing the session. Students administered a modified version of the Culture in Career Interview (Ponterotto, Rivera, & Sueyoshi, 2000) – a structured interview of 10 open-ended questions. Students submitted a digital recording of the session along with a conceptualization of the session.
The conceptualization of the session included a brief description of the client, a discussion of the client’s career issue, a reflection about the session, and plans for future sessions. This assignment required students to record themselves, upload the video, and share it with both the faculty member and with group members for use in Phase II of the assignment. The full assignment instructions for the interview and conceptualization are detailed in Appendix B.

Technology considerations must be taken into account when requiring students to submit digital recordings. First, students may have different comfort levels when dealing with technology. Providing tutorials, videos or written instructions with “quick tips” for the technology portion of the assignment can account for these differences. Some things that should be addressed are: quality of recorded video/audio, hosting of the video, and sharing of the video. YouTube is an accessible and user-friendly video hosting option. Second, in counseling courses, confidentiality becomes an important consideration when sharing videos online. YouTube videos can become more secure depending on the selection of privacy settings. While public videos can be seen and shared by anyone, private and unlisted videos are only accessible to select individuals who have the URL (Google, 2017). Students in this course shared an unlisted YouTube video by posting the URL along with their conceptualization in Phase I of the assignment. To account for confidentiality concerns, students were instructed to include verbiage in the client informed consent form that videos would be shared on YouTube as a component of the assignment. Students were also reminded that this assignment was a role play as opposed to a real counseling session. In accordance with professional standards, a real counseling session requires students to maintain confidentiality of their clients and to be under appropriate supervision (American Counseling Association, 2014). While these were simulated counseling sessions, the role play strategy provided students with experience using the tool and familiarity with the overall interview process.

Phase II. The group project was a collaborative student-created wiki that identified themes and relevant cultural considerations from the counseling sessions. The written instructions for the wiki assignment can be found in Appendix C. The wiki was created with the wiki tool within the learning management system (LMS). In order to facilitate this stage, students were broken into groups of 5-6 and required to post a URL to their recorded session on a course discussion board located in the LMS. Students were instructed to develop a group plan for completing the wiki which they posted on a group discussion board. In particular, students were asked to consider how their findings might help inform career counseling practice.

Two main technology considerations arose during the wiki creation. First, students were required to work in an asynchronous online group. Students’ experiences with online group work may be varied, which makes including resources for success important. In order to scaffold learning, students were provided with instructions on creation of a wiki and how to work on a wiki in a group. Given that the final group deliverable was a wiki, group communication and collaborative work took place within the group wiki. Wikis track individual editing and allow for student comments. This leads us to the second consideration, which deals with how familiar students are with wiki creation. Depending on the wiki platform, templates can be used to provide students with a guideline of how to set up the wiki. Conversely, you can provide tutorial videos and written instructions that guides students through the creation of the wiki and leave the wiki as a blank slate for them to shape.

Ask Yourself:
• What technologies will facilitate group work?
• How will you scaffold learning?
• What kinds of technology tutorials/support will be provided?
• How will you scaffold technologies?

Discussion
Backwards design places emphasis on specific skills and knowledge that students gain from the course. Pedagogy becomes central during the planning process of online courses, while technology is only used to meet instructional needs. Both strengths and challenges were identified after the initial delivery of the course discussed in the case study.
Recorded Counseling Sessions

Phase I of the assignments contained both strengths and challenges. Students were initially intimidated by the role play counseling sessions. However, the majority of students gave positive feedback throughout the course regarding these assignments as learning tools. Students were able to manage technology issues with the videos without too much anxiety and were able to allow the content to remain central to the assignment.

This assignment did present some interesting challenges. Students often used their smartphones to record sessions. Using their phones created several audio quality and storage. Students needed to place the phone close to themselves in order to capture the audio. If phones were placed too far away, the audio was of poor quality. Second, some students did not have enough storage to record the videos and had to re-record sessions or record sessions in parts. Finally, some students did not know where the videos were saved in their phones and had challenges “finding” their videos for uploading. Uploading videos presented a larger challenge for some students. Sometimes the uploading took much longer than students expected. Students also seemed to have issues simply managing the process of uploading the videos.

Group Wiki

Phase II of the assignment was far less popular with students. While the faculty member felt that students mastered the knowledge related to course-level objectives, the group project aspect of this assignment seemed to overwhelm students. Students struggled with the communication and planning of the group part of the assignment. Finally, the students seemed to struggle to grasp the concept of the wiki. They did not seem to utilize all of the resources given (video reviewing the wiki, instructions for submitting the assignment). Likely, this lack of effort for the wiki was because struggles with group communication dominated the assignment, making the new technology an afterthought.

Suggestions for Practice

Since the course instructor is unable to support the plethora of different phone and cameras that might be used, students would be referred to independently explore technology support available for their device. However, additional technology scaffolding could be included by providing video tutorials for recording and uploading videos. These would provide a base of how the process typically occurs and where videos are often saved in phones. More video hosting options (YouTube, Google Drive, and Dropbox) may cut down on student issues with uploading videos.

Group assignments often require more setup than initially built into a course. Providing more options for group communications may have facilitated collaboration for the wiki project. The Google Apps suite provides many free tools that support asynchronous and synchronous collaboration. Noting alternative communication options such as Skype or other services may have increased student communications and comfort during initial stages. One effective scaffolding technique to get students working with the wiki early would be to require the use of an introductory wiki where students post a brief bio and picture of themselves the first week of class. This could be placed in a folder with the tutorial information and a test wiki where students can practice use of the technology.

Conclusion

Creating an online class can be challenging for faculty, particularly when faculty are transitioning from face-to-face teaching to online teaching. Backwards design can help make this transition easier while keeping the focus on the course content rather than the technology. In this paper, a case study of a career counseling course demonstrated how backwards design can help faculty effectively teach concepts that can be challenging, while considering ethical issues specific to the program and balancing institutionally mandated standards. In a face-to-face class, managing these considerations can be overwhelming. In an online class, faculty must consider the additional component of choosing, and potentially learning, the technologies to best support student outcomes by using the step-by-step approach outlined by Wiggins and McTighe (2005). Faculty can take an overwhelming process and break it down into meaningful and manageable components.
References


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<tr>
<th>Course Objective</th>
<th>Module Objectives</th>
<th>Assessment</th>
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<tbody>
<tr>
<td>Apply theories and models of career development, counseling, and decision making.</td>
<td>(Students will be able to...)</td>
<td>Recorded Session, Conceptualization, Culture Wiki</td>
</tr>
<tr>
<td>Utilize strategies that advocate for diverse clients both ethically and culturally.</td>
<td>(Students will be able to...)</td>
<td>2.F.4.a, 2.F.4.e.</td>
</tr>
<tr>
<td>Differentiate between approaches for conceptualizing the interrelationships among and between work, mental well-being, relationships, and other life roles and factors.</td>
<td>(Students will be able to...)</td>
<td>2.F.4.b, 2.F.4.d.</td>
</tr>
<tr>
<td>Develop strategies to advocate for diverse clients’ career and educational development and employment opportunities in a global economy.</td>
<td>(Students will be able to...)</td>
<td>2.F.4.g, 2.F.4.j.</td>
</tr>
<tr>
<td>Utilize ethical and culturally relevant strategies for addressing career development.</td>
<td>(Students will be able to...)</td>
<td>2.F.4.g, 2.F.4.j.</td>
</tr>
</tbody>
</table>

**Assessment**

 Recorded Session, Conceptualization, Culture Wiki

**CACREP 2016**

2.F.4.a, 2.F.4.e.
Appendix B

Career Counseling Mock Session Instructions
For this assignment, you will record yourself conducting a 10-20 minute career counseling session using the Culture in Career Interview posted on Blackboard. You will then share the video with me and a small group of your classmates. This is a practice session, so you may use anyone as your client for this session – family member, friend, classmate, etc… You will need to have your client complete the Informed Consent/Permission to Videotape form I have posted. Keep this signed form in your files for this course. Once this course is over, I will delete the videos, and you will want to do the same; at that time you can destroy the informed consent.

You may share this video with me in a variety of ways: Dropbox, Google docs, or YouTube. I will post instructions for each method on Blackboard.

**If you are currently seeing clients and want to use a session with a client, please make sure that you have permission from your site or workplace in order to do this. They may have a separate informed consent form for you to have the client fill out. If you use a client for this session, you will need to share the video via Google docs or Onedrive.
**If you practice with a client under the age of 18, you must have the signature of the parent in order to videotape.

Career Counseling Session Conceptualization Instructions
After completing each career counseling session, you will write a brief reflection, analysis, and conceptualization of your session.

Your conceptualization should include the following sections:
- Briefly describe your client (age, race/ethnicity, SES, work status, etc…)
- Describe your client’s presenting career problem (why are they seeing you?)
- Summarize key points from your session
- Reflect on how you think your session went (surprises, learning moments, strengths, challenges)
- Discuss what you might do at a follow-up session with your client.

Additionally, your paper should meet the following requirements:
- 1-3 pages long
- 12 point Times New Roman font, double-spaced
- APA style formatting.
Appendix C

Culture in Career Wiki Instructions
In small groups, you will review your videos from your first career counseling session. Together, you will identify themes and important points from your videos. You will create a wiki, along with the rest of the class, describing the themes from these videos, summarizing your findings, and describing how these findings can help to inform your career counseling practice.

Your wiki should specifically include the following parts:

- Identification of the themes and important points from each individual video,
- Identification of 3-5 overarching themes that showed up in at least 3 of your individual videos,
- Summary of your findings,
- Implication for practice – how can your findings help inform career counseling practice.

Participation and communication with your group members is a large part of this assignment. Therefore, you will need to communicate with your group members in the assigned discussion board created within your group. This way I can track your participation. Additionally, you should post your work directly into the class wiki yourself. The wiki tracks individual participation. If you send your work to another member and he/she posts it, it will track that person’s participation – not yours.

Additionally, as a group, you should create a group plan for the assignment. In this plan, you must identify which group member is responsible for which component of the assignment AND when you agree to have these components completed. You will submit this group plan to me on the assigned date.
We’re Online, but Are We ADA Compliant? Free Tools and Resources for ADA Compliance

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The findings of this study suggested that accessibility compliance within web-based courses has not been achieved and a lack of familiarity with the requisite expectations is still very evident, particularly in the areas of visual and hearing impairments. Having faculty recognize the value of making online courses accessible at the time of creation may require a campus-wide culture change. So, apart from the obvious desire to meet legal expectations, we are committed to assisting instructors with making their content easily accessible, comfortable, and effective for a diverse range of students, thereby bringing about practices and programs that are indeed high quality.

Introduction

There is little disagreement that the rise of online learning in higher education has brought profound changes for instructors, students, and the institutions themselves. While online courses may certainly provide a more manageable college education for a wide array of students with certain disabilities, the very format of these courses may actually render the classes inaccessible to individuals with visual, auditory, speech, mobility, or cognitive impairments. Assistive technologies such as speech synthesizers, screen readers, screen magnification software, Braille output systems, and adapted keyboards permit students to retrieve materials on the Web, but the complexity and presentation of much of the information often make it incompatible with these devices. There has been little published research on the perceptions and experiences of faculty involving the accessibility of their online courses. Such scarcity is likely attributable to the relative newness of the fusion between distance education and course accessibility.

Originally signed in 1990, the Americans with Disabilities Act (ADA) was updated in 2010 when the Department of Justice (DOJ) published the Standards for Accessible Design. These standards assert that all electronic and information technology must be accessible to people with disabilities. In addition, Section 508 of the Workforce Rehabilitation Act requires federal agencies and their contractors to make their electronic and information technology accessible to those with disabilities. Thus, a public university receiving federal funding through the Assistive Technology Act is required to meet the Section 508 standards. Further, the U.S. Department of Education’s Office for Civil Rights (OCR) has emphasized that an institution’s communications with persons with disabilities must be as effective as the institution’s communications with others. Such communications include printed materials, lectures, and all Internet resources.

Institutional Context

As leaders of several key committees within our College of Education tasked with exploring academic innovations, student recruitment and retention at all levels, and distance learning quality assurance, our dedication to this topic has been prompted by several factors. First, our university has witnessed an expansion from 1,130 students taking at least one online course in fall 2005 to a total of 5,771 by the end of 2016. Concurrently, the number of online courses offered has proliferated from 82 in 2005 to 471. Admittedly, when online education was in its inaugural stages, we focused primarily on the sheer mechanics of getting the classes online...
and developing standard course materials to deliver content for a general population of students. The need to compete with other institutions for tuition dollars often got ahead of thoughtful planning.

In order to determine the current extent of our faculty’s compliance with ADA guidelines in their online courses, it was imperative to establish a starting point from which we could gauge the need for education, professional development, training, and resources so all instructors can best serve their students and support student success. Through the collection of data we sought to heighten awareness and encourage faculty members to reflect upon how their online programs and courses are consistent with accessible design, thereby providing a real opportunity for continuous improvement in both course development and implementation. We also place high value on the exposure of our pre-service teachers to faculty who are modeling student-centered uses of technology while promoting interaction and active engagement for all participants, regardless of whether the course is taught online or on campus.

Overview of Approach

Our research was grounded in the Web Accessibility Integration Model, espoused by Lazar, Dudley-Sponaugle, and Greenidge (2004), which insists that accessible websites must be sufficiently flexible to be used by assistive technologies. The ultimate objective is to assess whether delivery software applications and online curriculum content meet accessibility requirements and adhere to the principles of legislative compliance. In order to acquire the data necessary to make early evaluative judgments on our progress as a University in meeting such outcomes, we synthesized our roles as teaching professionals with the systematic and reflexive components of practitioner research that is committed to improving practice and influencing policies in a data-driven way so as to both inform and empower professionals (Ravitch, 2014). As espoused by Shaw and Lunt (2011), we participated in research to understand our own practices, encourage critical reflection by colleagues, and generate data to better assess current service delivery strategies. Barnard-Brak, Paton, and Sulak (2012) sampled 1,591 institutions of higher education and reported an association between distance education institutional goals aimed to improve distance education outcomes and how often students with disabilities enroll in these distance education courses and request accommodations at their respective institutions. Thus, the importance of an institutional mission and campus-wide commitment cannot be overstated.

Method

This study was conducted at a growing metropolitan university of more than 15,000 students served by approximately 2,000 faculty and staff on a suburban campus within a tri-state region in the Midwest. An electronic, researcher-created survey instrument was employed for data collection, with 14 fixed-choice items combined with several open-ended questions to provide clarification and actionable insights. Fixed-choice questions were analyzed through simple description that condensed the raw data into frequencies and percentages of responses. Such self-reported items were analyzed separately; therefore, a scale was not invoked. An inductive approach was then followed to examine the text generated from narrative responses, with content analysis the technique utilized to compress many words of text into fewer content categories based on explicit rules of coding, which, according to Creswell (2013), allow for the discovery, identification, and labeling of repeated evidence. The overall process was adapted from the procedures outlined in Haney, Russell, Gulek, & Fierros (1998), in which two people independently review the material and establish a set of features that form a checklist. We then compared notes and reconciled any differences that showed up on our initial checklists. Third, we used a consolidated checklist to independently apply coding. Open coding involved manually grouping together the frequently occurring keywords to create and organize a schema of categories. We also compared each respondent’s codes to the other respondent’s codes, checked for commonalities and differences, and ultimately produced a matrix of data patterns. Previous coding was then revisited to produce more highly refined themes that formed the basis for findings. The topics addressed within the survey were influenced by the recommendations of the Office for Civil Rights (OCR), which is responsible for the monitoring and enforcement of federal civil rights legislation in educational institutions.
Faculty members were asked questions regarding compliance of posted images, Word documents, PDFs, audio files, and video files. They were also asked about their existing knowledge of available tools for adapting their online courses for accessibility compliance and the barriers hindering their compliance. The survey yielded nearly 100 responses from faculty detailing their knowledge, challenges and successes with ADA compliance.

Where the Research Led Us

The findings of this study suggested that accessibility compliance within web-based courses has not been achieved and a lack of familiarity with the requisite expectations is still very evident, particularly in the areas of visual and hearing impairments. Through the instructors’ comments, one can also deduce that many of them view accessibility as an issue to be confronted after a student with specific needs appears on the class roll, but not necessarily a responsibility to be addressed in a proactive manner. Our argument is that accessible course design actually benefits all students, and planning ahead allows the time necessary to create effective, manageable materials as opposed to materials created under a last-minute scramble or in the midst of a demanding schedule. Having faculty recognize the value of making online courses accessible at the time of creation may require a campus-wide culture change. So, apart from the obvious desire to meet legal expectations, we are committed to assisting instructors with making their content easily accessible, comfortable, and effective for a diverse range of students, thereby bringing about practices and programs that are indeed high quality.

Thus, our “actionable items” for presentation include:

• Share data collected from our faculty ADA Compliance Survey. This will include both qualitative and quantitative data.
• Demonstrate a variety of tools that can be used to reach ADA compliance.
• Demonstrate Voice Base’s ability to convert audio and video files into machine generated written transcripts.
• Use Google Voice to demonstrate the conversion of the spoken work into real-time transcripts.
• Use YouTube to demonstrate automatic closed captioning and editing existing videos when mistakes are found.
• Demonstrate Word’s and Adobe’s accessibility checker to assist faculty in Word files into screen-reader accessible documents.
• Encourage audience participation through the sharing of ideas, challenges, and successes regarding ADA compliance.

Conclusions

Changing practice in the light of evaluation is the real value and innovation embedded in this presentation. Those who develop and teach web-based courses must be mindful of the different aspects of the online environment that can significantly impact the experience for the student. It is not enough to simply take one’s content and “paste” it online. One must ensure the transition from the traditional classroom to the online classroom is a seamless one. This process involves strong organizational skills, an eye on the details of the course, and, a commitment to accessibility for all of one’s students and potential students.

References

Using Online Grammar Checking Programs to Provide Feedback to Students in Writing-Intensive Courses

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Though students’ writing has important connections to their learning and engagement, instructors are often hesitant to encourage their students to write. This should not be surprising, given the many challenges associated with providing objective and timely feedback on student writing assignments. While many automated grading programs are still in their infancy and, therefore, not yet advanced enough to provide comprehensive feedback on writing assignments, explored here is the possibility of combining automated feedback with traditional instructor feedback. Namely, the authors have described ways in which instructors can use online grammar checkers to automate grammatical feedback. By reducing the demands of grammatical feedback, instructors could potentially free up time and energy that can, instead, be used to provide timely, detailed, feedback on the content of student writing.

Introduction

Writing is an important tool for student learning and engagement, with benefits to both students and instructors. The amount of writing in a course predicts student engagement. Specifically, students who write spend more time on, and have more interest in, a course (Light, 2004). Similarly, professors who integrate writing into their courses report that their students are more prepared for class and that class discussion improves (Bean, 2011). Writing helps to improve critical thinking skills, working memory capacity, and communication skills, (Dean, 2015; Hanson & Williams, 2008; Naber & Wyatt, 2014; Yancey, 2015). Clearly, writing is a valuable part of the collegiate learning experience.

Despite these benefits, instructors often resist teaching writing-intensive courses (Boice, 1990). This resistance may find its basis in the high level of feedback that instructors of these courses must provide. Grading writing is time-consuming and often subjective. In one classic study, 53 professionals were asked to grade, on a 1-9 scale, 300 freshman essays. No essay received fewer than five different grades (Diederich, 1974). Because of these concerns, authors from as far back as the 1960’s have called for computer-automated essay grading (Page, 1966; Valenti, Neri, & Cucchiarelli, 2003; Wresch, 1993). Unfortunately, many of the tools available for such automation can be described as “a work in progress” (Valiente et al., 2003, p. 325). Because of this, it seems that automated grading techniques are better suited to be used in conjunction with more traditional instructor feedback so that instructors provide students with quality feedback without investing as much time as was previously necessary.

Grammar can be an especially challenging aspect of the writing process to grade objectively and efficiently. Seminal research shows that teaching grammar in the classroom may harm student writing (Braddock, Lloyd-Jones, and Schoer, 1963). Truscott (1996) suggests that providing grammar corrections on student writing is detrimental, because of its negative impact on instructor energy for other teaching pursuits. If instructors wish to help students to effectively communicate their ideas in a writing-intensive course, they must directly provide feedback on student writing. Automating grammatical feedback has the potential to allow instructors time to focus their energies on providing quality feedback on other aspects of the writing process.

The purpose of this manuscript is to examine one potential way in which instructors of writing-intensive courses may overcome the challenges to providing objective and timely feedback on student writing. Namely, it is proposed that instructors consider using an online grammar checker when
grading student work. Tools such as Grammarly, Slick Write, and Spell Check Plus provide automated feedback on common grammatical mistakes (commonly misused words, over-used words, passive voice, overuse of “I”, etc.). This manuscript focuses on the possibility of automating grammatical feedback through the use of such tools so as to allow instructors more time to provide feedback on the content of student writing.

**Online Grammar Feedback Sources**

There are many tools for automated grammatical feedback on the web. Below, we give a brief overview of three such sources. We have chosen to describe only three sources here, for the sake of brevity, and we have chosen these particular three because they provide a sound representation of the level of feedback available from both free and paid sources. Should the reader be interested in exploring other sources, we would recommend referring to an ongoing discussion of the subject found on the web (Bisht, 2017).

**Slick Write**

Slick Write is a free online spelling and grammar checker that allows users to paste their text directly into an online window in order to receive feedback on that same page (Slick Write, n.d.). Slick Write provides reports to the user about the number of words, sentences, and paragraphs in the writing, the level of complexity of the writing (based in complexity of vocabulary and sentence structure), and the average amount of time it is expected that a reader would need to read said passage. Slick Write also provides color-coded feedback on the “flow” of the writing, including the progression of word length and sentence length throughout the writing. Perhaps of most use to instructors of writing-intensive courses, Slick Write also provides feedback directly in the text of the submitted writing with regard to potential spelling and grammatical errors that have been made. We have included in Figures 1-4 of this manuscript examples of one student research paper that has been analyzed by each of our three chosen grammar checkers. In Figure 1, it can be seen that Slick Write primarily identified, in the student writing sample, overuse of the passive voice. Though not present in this particular writing sample, Slick Write also has color-coded underlines to identify adverbs, passive voice, and what it considers to be “excessive prepositional phrases” and “wordy or redundant phrases”.

Instructors of writing-intensive courses could potentially copy and paste student writing assignments into the website so that it could quickly highlight for them grammatical concerns that they could then use to guide the feedback that they give within their own feedback system. For example, instructors could read the summary provided by Slick Write to then quickly make overarching comments in Word about a students’ grammatical progress (i.e., “I’ve seen great improvement in your use of there/they’re/their since your last draft, but I see that you are still relying heavily on the passive voice. Remember that APA format prefers the use of the active voice.”). Alternatively, as this is a free tool, instructors could give students instructions to run their own work through Slick Write and to provide some sort of documentation that they have done so, before they submit writing assignments in the course.

**Spell Check Plus**

Spell Check Plus (Spell Check Plus, n.d.) is another free online grammar checker that could be of use to instructors and students within writing-intensive courses. Like Slick Write, it allows users to paste writing samples into an online textbox, and it provides feedback on the sample within the webpage itself. That said, it differs from Slick Write in two key ways.

First, the quality of the feedback provided is a bit more personable and may be more useful and relatable to student writers. For example, as can be seen in Figure 2, when hovering over a correction for the students’ incorrect use of the word “effect,” users are provided with the feedback that they should “write effect; affect is a verb.” Similarly, potentially misspelled words are highlighted in yellow, and hovering above them results in a list of potential correctly-spelled replacement words. In the case of the student sample in Figure 2, Spell Check Plus has incorrectly identified author and psychological scale names as misspelled, though, admittedly, by highlighting in yellow rather than red, it suggests to the user that they should “check” those notes rather than necessarily “change”. The tool offers a “grammar score” ranging from 0% to 100% based
on the number of “errors” that it identifies, though this score has limited applicability to grading, as the score is negatively impacted by the “check” items that it finds. Thus, it could potentially penalize users who cite authors with uniquely spelled names.

The second key difference between Slick Write and Spell Check Plus is that Spell Check Plus limits users to analyses of blocks of text that are 2000 characters (about 250 words) in length. For a fee of roughly $15 per year, users may upgrade to an unlimited version, which also removes ads and provides users with grammar exercises, but this cost may be limiting to some students and instructors. This has important implications for the tool’s use in a classroom environment. Within writing-intensive courses, it may be rare for students to submit assignments that are fewer than 250 words. As such, the instructor is left with two potentially undesirable options. The instructor may choose to pay for the service each year and then run each student assignment through Spell Check Plus so that they can then use the comments provided in the system to guide the comments that they provide on student work. Alternatively, as with Slick Write, the instructor could assign students to run their own work through the program before submitting any drafts. However, this second option would require careful consideration of the financial standing of each student within a class.

**Grammarly**

One final tool that we consider here is Grammarly (Grammarly, n.d.). Unlike the above options, Grammarly functions as a pay tool, at a current cost of approximately $12-$30 per month, depending on the length of subscription to the service. That said, the program offers many features that are not available in the above options. Like the above tools, it provides users with feedback on potential misspellings and grammatical errors, and it identifies instances of the passive voice, potentially overused words, and more. However, it does so in a much more user-friendly format than do the services described above. The system allows users to upload full documents to the website, rather than copying and pasting into a text box, which means that users do not lose their formatting upon uploading. Then feedback can be given in two forms. Users may opt to view feedback directly on the website (as can be seen in Figure 3) or they may download a Word document in which the feedback is incorporated as review comments and tracked changes. This format may be more desirable for instructors who wish to intermix Grammarly feedback with their own feedback within the same document (see Figure 4).

As with the above tools, instructors may use Grammarly to provide initial review on all students’ submitted assignments, or they may have students each review their own work through Grammarly before submitting drafts. This second option is less desirable, given the potential cost of the tool to students, but the first may very well be a more feasible option than it would be with the free tools. Though individually running each student’s work through any of the three tools could be time consuming for instructors, and though Grammarly would require a financial investment from the instructor, Grammarly’s output relative to the free tools is much more conducive to providing comprehensive feedback to the student in timely manner. Whereas instructors running student work through the free tools would need to retype any comments given by those systems into their own grading system, Grammarly’s export-to-Word format allows instructors to provide students with one document of feedback, with no retyping necessary. Thus, it has more efficiently than the other tools described here accomplished the goal of automating grammatical feedback so as to speed the grading process and provide students with more efficient feedback.

Grammarly is the only online grammatical tool for which we have been able to find peer-reviewed research relating to its academic merit. Admittedly, some research in this area focuses on those who are learning English as a foreign language (Bomar, 2014). For example, one study found that while teachers were more influential to improving students’ passive language structure scores on an immediate post-test, Grammarly was more influential to students’ scores on a delayed post-test (Qasemzhadeh & Soleimani, 2016). Still, other research focuses on students’ perceptions of the usefulness of Grammarly. In a case study of 12 students, 80% of these students positively rated Grammarly’s usefulness and ease of use, and all but one indicated that it had a positive impact on the quality of their writing. To the best of our knowledge, only one study has examined the utility of Grammarly in improving
student writing. Japos (2013) found in a sample of 47 students, across disciplines, whose use of Grammarly led to statistically significant improvement in students’ use of commonly confused words, their use of articles, their pronoun agreement, and more. Thus, it seems that using Grammarly in order to speed the process of providing feedback to students is not only pedagogically sound and is beginning to be addressed in the current research, but that data collected on this process could contribute well to this blossoming new area of research.

**Discussion**

Though students’ writing has important connections to their learning and engagement, instructors are often hesitant to encourage their students to write. This should not be surprising, given the many challenges associated with providing objective and timely feedback on student writing assignments. While many automated grading programs are still in their infancy and, therefore, not yet advanced enough to provide comprehensive feedback on writing assignments, we have explored here the possibility of combining automated feedback with traditional instructor feedback. Namely, we have described ways in which instructors can use online grammar checkers to automate grammatical feedback. By reducing the demands of grammatical feedback, instructors could potentially free up time and energy that can, instead, be used to provide timely, detailed feedback on the content of student writing.

From our examination of the currently-available online grammar checkers, it is clear that there are benefits and drawbacks to using each. When choosing an appropriate tool, instructors must consider how they intend to implement the tool—if they intend to have students utilize the tools on their own before submitting drafts to the instructor, or if instructors, instead, will use the tools on their students’ behalf so as to quickly provide this feedback to their students alongside their own feedback on the content of the work. Additionally, instructors must carefully consider the financial implications of utilizing the tools, as costs differ between the tools. If instructors wish to have low-income students utilize a grammar-checking tool before submitting drafts to the instructor, it appears that Slick Write can best meet these needs. If, instead, instructors are unconcerned with cost to themselves and wish to automate grammatical feedback to students that can be given alongside their own content-relevant feedback, Grammarly appears to be the best tool.

These pedagogical recommendations can only be made on the basis of currently available research. To the best of the authors’ knowledge, only Grammarly has been explored in the academic literature. Though this research indicates that students find Grammarly enjoyable and that feedback from this tool may help to improve student writing, there has been no research to indicate the utility of such a tool in improving the objectivity and timeliness of instructor grading. Therefore, we conclude, that, while the benefits associated with Grammarly certainly indicate that it is pedagogically sound to attempt to use an online grammar checker to facilitate more efficient grading, there is still considerable opportunity to collect data on this sort of usage in order to contribute to this new and growing field of research.

**References**


Dianati, S., & Cavaleri, M. (2015). ‘You want me to check your grammar again?’: How online grammar checkers can complement our feedback to students. Paper session presented at the 12th Biennial Conference of the Association for Academic Language and Learning, New South Wales, Australia.


Appendix

Figure 1. Grammar feedback generated by Slick Write website.

Figure 2. Grammar feedback generated by Spell Check Plus website.
Participants
The participants were 49 Murray State University students who were enrolled in Psychology 180, Introduction to Psychology. They were recruited through SONA (the university's research website) and received credit for their class. The only restriction was the participants had to be at least 18 years old. The participants were 18 to 21 years old, with the mean age of 19.5. There were 28 males and 21 females. Participants were Caucasian, African American, and Hispanic. Most of the participants were in their early years of college.

Design and Procedure
After the participants entered the designated room for the study, they took a survey on Reasons for Listening to Music. Next, the participants took a pre-test, the Positive and Negative Affect Schedule (PANAS) to gauge their mood. After that, they listened to a five-minute excerpt of Beethoven's 5th Symphony or sat in silence for five minutes. Next, the participants were given another PANAS post-test to evaluate the effect of music on their mood. Finally, a short-term memory test was given as a part of a larger investigation on mood, music, and memory. The participants were given five minutes to complete each PANAS survey and five minutes for the Reasons for Listening to Music questionnaire. They were also given five minutes for the memory recall test. The study took approximately 30 minutes to complete. A true experiment design was used. The independent variable was music. Participants were either in the music or no music group. Groups were randomly assigned. The dependent variable was mood.

Figure 3. Grammar feedback generated by Grammarly website.
After the participants had entered the designated room for the study, they took a survey on Reasons for Listening to Music. Next, the participants took a pre-test, the Positive and Negative Affect Schedule (PANAS), to gauge their mood. After that, they listened to a five-minute excerpt of Beethoven’s 5th Symphony or sat in silence for five minutes. Next, the participants were given another PANAS post-test to evaluate the effect of music on their mood. Finally, a short-term memory test was given as a part of a larger investigation of mood, music, and memory. The participants were given five minutes to complete each PANAS survey and five minutes for the Reasons for Listening to Music questionnaire. They were also given five minutes for the memory recall test. The study took approximately 30 minutes to complete. A true experiment design was used. The independent variable was music. Participants were either in the music or no music group. Groups were randomly assigned. The dependent variable was mood.

Materials

The materials that were used were a pre-test and post-test PANAS survey, a Reasons for Listening to Music questionnaire, and a five-minute excerpt from Beethoven’s 5th Symphony.

Positive and negative affect schedule. The PANAS is a mood survey that measures positive and negative affect. It includes 20 items and is rated on a 5-point scale. Items number 1, 3, 5, 9, 10, 12, 14, 16, 17, and 19 are counted as having a positive effect from stringing from 10-50, with the higher numbers indicating a more positive affect. Items number 2, 4, 6, 8, 11, 13, 15, 18, and 20 are counted as having a negative affect rating from 10-50, with the lower numbers indicating a more negative affect.

Figure 4. Grammar feedback generated by Grammarly as Word document output, with instructor comments interspersed.
Student Perceptions of Vicarious Learning Lessons in Two Online Graduate Courses

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Vicarious learning is based on the concept that students can understand course material through observing other students’ learning experiences. In online classes, the opportunity to observe classmates asking questions and getting corrections is typically more limited. Vicarious learning lessons were created for research and statistics online graduate courses. The content of the lessons was derived through gathering student feedback on topic areas requiring further clarification, as well as instructor evaluation of the course. Once the lessons were implemented, qualitative and quantitative student feedback was collected. Overall, feedback was positive and indicated student agreement regarding the helpfulness of the lessons.

Introduction

In the traditional face-to-face classroom experience, students interact with the instructor as well as with one another. The instructor may ask students to work together to discuss and develop a solution to a problem, or the instructor may clarify a confusing concept when interacting with a single student. When other students observe and internalize these interactions secondhand, they have the opportunity to learn from them, via a process known as vicarious learning (VL) (Bandura, 1962). In face-to-face college courses, this important process enhances learning when students better understand course material through directly observing other students’ learning experiences. In online classes, however, the opportunity to observe classmates asking questions and receiving corrections is typically more limited. Given these constraints, students in online classes often have fewer opportunities to grasp course content through VL. Creating web-based multimedia lessons that illustrate various types of vicarious educational experiences can address this problem by bringing targeted observational learning into the online environment.

As originally outlined by Bandura (1962), vicarious learning is the general process by which we gain knowledge through observing the behavior of others and its consequences. In face-to-face educational settings, the use of VL has been extant long enough to become a “standard in the teaching repertoire” (Tarcinale, 1987, p. 340). At the collegiate level specifically, VL (sometimes called observational learning) has been shown to be a powerful teaching tool in numerous traditional classroom settings. Multiple researchers have indicated that college students experienced gains from merely observing previously recorded interactive tutoring sessions (Craig, Driscoll, & Gholson, 2004; Cox, McKendree, Tobin, Lee, & Mayes, 1999). It has also been consistently reported that presenting vicarious learning material along with regular instruction can lead to greater performance than using regular instruction alone (Hoover, Giambatista, & Belkin, 2012; Shea, Wright, Wulf, & Whitacre, 2000).

Relatively less research has been conducted on the application of VL to students in online classrooms. Lee (2005) and Sutton (2001) investigated the effectiveness of distance students observing classmates in online forums and discussion boards, concluding that this approach can enhance learning. Similarly, Muller, Bewes, Sharma, and Reimann, (2008) found that, in an online physics course, having learners watch videos involving a tutor-student dialogue produced greater learning than videos merely presenting material in an expository manner. Interestingly, Muller et al. (2008) also concluded that videos addressing perceived common student misconceptions were effective tools for learning.
The current project thus represents an expansion of these earlier studies in the two following ways:

- The authors create free-standing multimedia VL materials rather than using existing forums or discussion boards.
- The authors go beyond presenting assumed misconceptions and instead focus on addressing specific topics on which students require further clarification, as dictated by performance data and student feedback.

**Program Context**

The master’s program and courses that were included in this project were moved to an asynchronous fully online format several years prior to implementation of the project. The courses included both a research methods and a statistics course at the graduate level. The project was conceived once it was detected that students in the new Blackboard-based courses were struggling with material that previous face-to-face classes were able to grasp. One possible explanation for this decline in performance was the lack of observation-based learning opportunities in the strictly online environment.

To address this performance issue in the online graduate research and statistics courses, the VL lessons were created as a supplemental tool to assist students in mastering difficult material. This project qualitatively and quantitatively assesses the efficacy of the VL multimedia lessons through analyzing student feedback regarding helpfulness, and gauging instructor perceptions of student improvement.

**Overview of Strategy**

Prior to implementation, the study was approved through the University’s Institutional Review Board. The strategy was implemented into one graduate research and one graduate statistics course. Both courses were taught in an asynchronous online format with a series of modules that students completed at their own pace. The project was implemented in two phases. Phase one included gathering preliminary feedback from students, and phase two included creating, disseminating, and evaluating the VL lessons.

During phase one, students in the online graduate research and statistics courses were asked to provide feedback during the last two weeks of the semester. A voluntary survey was administered that asked students to quantitatively rate their level of understanding of each research or statistical concept that was included in the course. The rating scale ranged from 1 (very little to no understanding of the concept/very confusing), to 4 (understand/mastered the concept/no confusion).

Students were also asked to qualitatively comment on concepts that were confusing or that could use further clarification. Next, the instructor assessed and evaluated assignment, quiz, and test scores from current and past courses from the previous three years. Evaluation focused on identifying content areas where students lacked understanding. The student quantitative and qualitative feedback, along with the instructor evaluation of the course, was then used to identify the confusing or unclear concepts that would be the focus of the VL lessons.

The concepts identified included the following:

- Interpreting power, effect size and sample size graphs
- Calculating and interpreting Pearson’s r, Levene statistics, regression equations, t-tests and ANOVAs
- Avoiding frequent mistakes in writing a review of literature
- Writing the methods section of a research paper.

Phase two included creating the vicarious multimedia lessons and implementing them into each course. An introduction video was also created and launched at the start of the semester. The introduction video explained the concept of VL and encouraged students to view the lessons prior to completing homework assignments or other assessments. The video also informed students that there would be a voluntary survey at the end of the course to help evaluate the usefulness of the lessons. The vicarious lessons were created and disseminated in a variety of formats which included:

- Videos demonstrating past student successes and failures. For example, videos would show the instructor grading past student papers and assignments while giving verbal feedback. Note: students were contacted and all gave permission to have their work used for the lessons.
- Video links embedded directly in the homework assignment discussing common mistakes.
• Videos answering frequently asked questions from prior students in classes from previous years.

All videos were created using a free online software program, Jing.com. At the end of the course, students were asked to rate their understanding of the concepts, and the usefulness, quality and clarity of each lesson.

Results and Analysis

All students enrolled in both the fall and spring courses (n=13) volunteered to complete the evaluation of the VL lessons. Overall, student quantitative and qualitative feedback was positive with regard to the lessons. Each course was assessed separately and used a separate scoring scale tailored for the needs of that particular course. In the statistics course, students were asked to rate their understanding of the concepts covered in each VL lesson. All students (n=6) rated their understanding between a 3 (mostly understand the concept/ some confusion) and 4 (understand/mastered the concept/ no confusion) for each VL lesson with means between 3.50 (SD = 0.55) and 3.67 (SD = 0.52). In the research methods course, students were asked to rate their agreement using a Likert scale from strongly disagree (1) to strongly agree (5) rating the helpfulness and clarity of the four lessons presented. Mean scores (n=7) ranged between a 3.67 (SD = 1.63) and a 4.33 (SD = 1.21). The majority of the mean scores were above a 4.0, which indicates an overall agreement with the usefulness of the lessons.

Students also provided positive qualitative feedback. Each student indicated that the VL lessons were helpful overall in understanding difficult concepts and in enhancing their learning in an online format. Themes that emerged from the qualitative responses included how VL lessons assisted with overall understanding of concepts, helped students avoid making common mistakes, and appealed to a specific learning style. Although students gave constructive feedback by suggesting other topics that could benefit from VL, no negative feedback was given regarding the VL lessons.

Several students commented specifically on how the VL lessons were helpful and assisted with their learning in an online course. The following are quotes from students who commented on the helpfulness of the VL lessons:

Each Vicarious Learning lesson was extremely helpful; I personally prefer face-to-face courses over online these lessons made me feel more like I was sitting in a classroom. (Student 4)

The vicarious learning lessons help a lot to understand what the professor is wanting. It’s a better rubric and guideline. I believe all professors teaching online classes should use vicarious learning lessons. (Student 3)

Other students commented on how the VL lessons helped them avoid making common mistakes. For example, one student wrote:

I loved being able to hear and watch the assignment. I would have made some of the same mistakes the example paper did- This gave me clear understanding of the assignment. (Student 6)

Finally, several students commented on how the VL lessons appealed to their specific learning style. The following quotes are from students regarding learning style:

These vicarious learning lessons have made online classes much easier for me, and I learn a lot more than I do in other classes. The content makes much more sense when you explain it this way. It appeals to my style of learning! I think you should continue to add these to your classes. (Student 5)

I personally am a person who learns best from hearing someone explain something to me. Those lessons were definitely helpful, since I tend to struggle with not being in a classroom with online classes. (Student 7)

I without a doubt could not have survived this class without the screen casts. I am a visual learner and those helped me tremendously. I find the vicarious learning tutorials extremely helpful in mastering the concepts. I believe that it was easier for me to master the topics that had the tutorials. (Student 8)

Discussion and Considerations

The current lessons were created by using past student work and frequently asked questions from the previous three years of discussion boards. The lessons included Microsoft Word and PowerPoint documents with audio overlay and did not feature an actual live student interacting with the instructor. However, future lessons could include students being either audio or video recorded live asking
questions or working through problems with guidance from the instructor. This variation would add a real-world element to the course and would more closely mimic what students observe or experience in a typical face-to-face course.

The VL employed in this project focused only on the instructor-learner interaction. However, other types of interactions, such as interaction with the content and interaction with peers, are considered to be important for student success in the online environment (Moore, 1989). Vicarious learning may have occurred in each of these other types of interactions or a combination of two or more interactions. For instance, interaction with peers occurred in the online discussion board while the instructor monitored and corrected misconceptions. However, these interactions were neither manipulated nor measured in the current project. Future lessons could focus on increasing and assessing vicarious learning within content and peer interactions.

There were some disadvantages that were associated with creating the VL lessons. First, the instructor had to invest a significant amount of time into analyzing the need for and creating the multimedia VL lessons. This time investment increases the burden of course creation since these lessons were in addition to the multimedia that was used to create the course content. Also, it would be difficult to address every need or misconception of every student with the VL lessons. For instance, one student stated:

"It may have been helpful, to me, to highlight proper techniques. The VL covers what not to do’s, which was very helpful, but left some question to me on proper things for me to do. You did touch on certain things TO DO, I believe it was more my topic and how to organize my personal lit review that I was not grasping. (Student 1)"

Therefore, some students may still have a lack of understanding if their specific issue is not addressed in the lesson. Also, the VL lessons were not required nor were they tracked. Students were strongly advised to view each lesson prior to completing assignments, but some students may have opted out of viewing this additional content. Although students overall reported a higher level of understanding of course content, some students continued to make the mistakes that the VL lessons were designed to prevent. It is not clear if the lessons did not clearly explain the common mistakes or if these students simply chose to forego viewing the lessons.

The quality of student work greatly improved in the modules and assignments in which VL lessons were made available. This was qualitatively assessed by the instructor. For the current project, test scores were not used in the analysis of the VL lessons. Since the purpose was to evaluate student feedback and perceived helpfulness of the lessons, test and assignment scores were not used in the final analysis. Comparing test or assignment scores could assist in fine-tuning the VL lessons for future courses.

As mentioned above, in a face-to-face course, students have the opportunity to learn vicariously from observing other interactions that occur in the classroom. This opportunity is not usually afforded to students in the online environment. Students reported the VL lessons as a positive addition to the online research and statistics courses. Future research should examine other ways to implement VL into the online environment and whether student exam and assignment scores improve with the addition of this content.

This strategy can be applied to other disciplines to enhance both undergraduate and graduate online learning. This technique would be particularly useful in courses that may be challenging to teach online, such as STEM courses (Science, Technology, Engineering and Mathematics) or courses that teach critical thinking in which it is important for students to observe their classmates’ learning experiences.

References


Interactive Video Quizzes to Enhance Student Learning

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This article provides college educators with the opportunity to learn about the andragogy and basic technology of using video quiz assessments. Interactive learning tools can increase student engagement by enriching the learning environment. Embedded video quizzes can positively impact learning by focusing students’ attention on the learning materials and by providing rapid assessment and feedback to responses. Four interactive video platforms are presented, including Playposit, EdPuzzle, Adobe Captive 9, and Articulate Storyline. Basic features of the video quiz tools are described, and the advantages of using video analytics to evaluate student engagement and tweak faculty-created videos are highlighted. Two faculty-created video assessments used to teach procedural modality and clinical reasoning skills to occupational therapy Masters’ courses are reviewed.

Introduction

The art and science of teaching adults in the college environment requires faculty to be knowledgeable about not only the subject matter or discipline in which one teaches, but also fluent with andragogy and technology. According to Knowles, andragogy consists of using prior knowledge and experiences to solve problems, assume new roles, and apply it immediately to current situations (Knowles, Holton, & Swanson, 2014; Robinson, Wilson, & Mcneill-Cook, 2017). One tool for adult learners and faculty is interactive technology, which is readily used to solve everyday problems and can provide immediate feedback to the student and faculty. This article will provide the pedagogy for using video-based learning along with introductory skills for making video quizzes.

Program Context

Video-Based Learning has been shown to improve learning outcomes and learner satisfaction. Many online and face-to-face courses use instructional videos plus quizzes, rather than integrated video quizzes (Kay, Reimann, Diebold, & Kummerfeld, 2013). Video-based learning using embedded questions has been shown to promote student learning and improve interaction of the student with learning materials (Cummins, Beresford, & Rice, 2016). Griswold, Overson, and Benassi (2017) conducted a study of students using video quizzes versus not using video quizzes in an online learning module consisting of lectures, slides, demonstrations and video clips. Students who were quizzed throughout the learning module performed better than the students who did not complete the video quizzes. Vural (2013) found that embedding quiz questions improved students’ performance on subsequent quizzes. Video quizzes are a form of retrieval practice, can emulate one-on-one tutoring, and enhance attention and focus of the student on the learning materials (Kleftodimos & Evangelidis, 2016).

Overview of Strategy

Andragogy of interactive videos. Passively watching a video without any discussion, review, or cuing does not necessarily translate into learning (Brame, 2015; Stigler, Geller, & Givvin, 2015). Mayer’s Cognitive Theory of Multimedia Learning (MCTML; Mayer, 2010) provides concepts that can be included to improve learning when viewing a video. MCTML postulates that auditory/verbal input along with visual/pictorial media enhances learning. Words are processed in verbal working memory and images are processed in visual working memory. These words and images form mental models, which are then integrated with prior knowledge (Berk, 2009). When developing an effective
educational video, faculty need to be cognizant of the need to include written words within the videos along with visual and auditory inputs. A balance of text, image, and audio needs to occur within an effective educational video to prevent cognitive overload, which can detract from student learning (Brame, 2015).

A video quiz, as an instructional tool, promotes student engagement and supports students’ understanding of more challenging concepts (Shelton, Warren, & Archambault, 2016; Edel-Malizia, Brautigam, Bittner, & Blackstock, 2015). Including an assignment related to the content of the video can require a higher level of cognitive engagement (Kleftodimos & Evangelidis, 2016). Quizzes at the end of lecture videos, however, are not as effective as questions (Reinecke & Finn, 2015) embedded within the video, where quizzes can be individualized, educational and interactive (Shelton, Warren, & Archambault, 2016). Along with learning difficult material, integrating questions within the video can ensure that online videos are being viewed and students are grasping the information presented (Lacher & Lewis, 2015). Additionally, it encourages student engagement, improves retention of knowledge, promotes deeper reflective learning and enables students to test their understanding of the course material (Cummins, Beresford, & Rice, 2016; Kovacs, 2016).

**Model for developing interactive videos.** The Padagogy Wheel ENG 5.0 (Carrington, 2016) is a resource tying technology applications to modern andragogy, theories, and specific learning outcomes (https://designingoutcomes.com/english-speaking-world-v5-0/). The Padagogy Wheel is designed with student motivation and capabilities at the center of learning. In increasing concentric circles, the six levels of Bloom’s Digital Taxonomy are connected to action verbs, learning activities, and specific technology tools. Each of Bloom’s cognitive levels has approximately 30 educational apps available as a pdf, or through Google Play or iTunes. The Padagogy Wheel uses the Substitution Augmentation Modification Redefinition (SAMR) model, which provides a lens to view technology integration in education (Kharbach, 2017). At the substitution level, faculty/students perform the same task, but the tools have changed (using Google docs). At the augmentation level, new features or services are added to the task (sharing Google Docs with others). Where student learning becomes transformed is at the modification level, where tasks are significantly redesigned (students collaborating on one Google Doc). New tasks are added at the redefinition level where educators design and students create previously inconceivable tasks (world classroom where students chat, voice comment, and reflect on this cultural experience). When using the SAMR model, educational technology becomes increasingly important in college teaching and more integrated into the teaching and learning process. For example, a faculty-created video quiz for teaching would be grouped under Bloom’s category of evaluation, and a student-created video quiz would be ranked at the highest order in Bloom’s digital taxonomy, that of creation.

**Technology of Interactive Videos.** Several interactive tools that can be used to develop educational videos including Edpuzzle, Playposit, Adobe Captivate, and Articulate 360. These tools include video editing, embedding questions, providing feedback to answered questions, and narrating. Editing tools allow one to “cut” the video to customize the footage and insert questions or text relative to video content. Open-ended, multiple-choice, or short-answer questions can be inserted at any point within a video. Lastly, some platforms allow for narration to either personalize the content or insert additional information (Edudemic Staff, 2014). Table 1 lists four interactive video tools and the pros and cons of using each in college teaching.

**Learning Analytics.** Learning analytics measure and analyze data about learners and their contexts to understand the learning process and optimize the learning environment (Dietz-Uhler & Hurn, 2013). Analytics are a component of interactive video platforms that can provide crucial information to faculty members about student success, including areas of misunderstanding, level of effort and persistence, and other details about learning (Edel-Malizia, Brautigam, Bittner, & Blackstock, 2015; Mehaffy, 2012). For instance, after students have viewed a video and answered embedded questions, the instructor can review the answers to the embedded questions either collectively or by student. Analysis of data from student responses can indicate content areas mastered by students, areas of study where reinforcement is necessary,
Examples of Interactive Videos. Two faculty projects apply contrasting ways to use interactive video quizzes with students: learning modality equipment procedures prior to coming to class and reinforcement of clinical reasoning skills after class attendance. In a class teaching occupational therapy students how to properly apply thermal and electrical modalities for the treatment of musculoskeletal conditions, students had a limited amount of time to work with expensive loaner equipment. Faculty developed a series of six interactive videos with embedded questions so students could learn how to operate the therapeutic modalities equipment prior to coming to the practice labs. Students’ completion of online video quizzes prior to attending class was their “entrance ticket” to participating in the practice lab.

In another class, students were learning various types of clinical reasoning. A video was created by faculty which simulated “a typical” occupational therapy visit. Within this video, students were asked to identify various types of reasoning. The students completed the video quiz after a class on clinical reasoning in occupational therapy. Since this a complex skill for students, the analytics of the quiz provided faculty with details regarding types of reasoning which needed further reinforcement.

Analysis

Descriptive data from the modality equipment procedures video quizzes indicate all students completed the video quizzes. Half of the students viewed the video two or more times. Video quizzes were preferred over watching videos and taking notes. Student feedback was that video quizzes combined content and assessment, which was time efficient for students. Faculty informally noted students were better prepared for lab and completing the video quizzes prior to lab shortened the practice time necessary to learn use of the modality equipment.

Table 1. Comparison of Four Video Quiz Programs

<table>
<thead>
<tr>
<th>Interactive video tools</th>
<th>Pros</th>
<th>Cons</th>
</tr>
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| PLAYPOSIT
https://www.playposit.com/panel/lessons (free and pay versions are available) | • Video Sources: YouTube, Vimeo, TeacherTube, SchoolTube, Uploaded mp4s, create your own
• Good directions for creating a learning bulb
• Assign bulbs to class/monitor grades/formerly known as EduCanon
• Access to premade bulbs from other instructors | • Not integrated with LMS, needs LTI (Learning Tools Interoperability)
• Can NOT add more than one video clip per lesson |
| EDPUZZLE
https://edpuzzle.com/content (free and pay versions are available) | • Video Sources: Google classroom integration, YouTube section
• Audio voiceover
• Can prevent skipping ahead
• Learning analytics are more comprehensive than Playposit | • Instructions are not as easy to follow compared to Playposit
• Only 5 free videos
• Getting started instructions 16 minutes with accented speech |
| ADOBE CAPTIVATE
https://www.adobeknowhow.com/course-landing/what-s-new-adobe-captivate-9#overview (free 30 day trial) | • Adobe Captivate 9
• Quiz creation: multiple choice, multiple answer, fill in the blank
• Formative (knowledge check questions) & Summative (review quiz) Assessments | • Approximately $300 per license
• Steep learning curve |
| ARTICULATE 360
https://articulate.com/360/storyline (free 30 day trial) | • Articulate 360
• Similar to PowerPoint
• Quiz creation: multiple choice, multiple answer, fill in the blank
• Formative (knowledge check questions) & Summative (review quiz) Assessments
• Creates a Responsive eLearning user experience | • Approximately $1000 per license
• Steep learning curve |
Although comparative data was not gathered for the clinical reasoning video, the results indicated that the students did not understand each type of clinical reasoning. This information resulted in the faculty providing additional instruction on this area and modifying the curriculum for the next year. Because of this video, new learning activities will be added to the course, which will provide opportunities for the students to practice applying them.

Embedded video quizzes can have a lasting impact on student learning due to the rapid feedback provided (Kushnir & Berry, 2015). In a study by Griswold, Overson, & Benassi (2017), 56 female students from a mid-size public university enrolled in a 14-week course. Lectures were delivered in class, face-to-face, and out of class using lecture capture software. Three recorded sessions included lectures, demonstrations, and video. Within each lesson, learning moments were presented. The learning moments consisted of multiple choice quiz questions, study questions where students documented that they had read or studied the content, and not asked was a control condition where no questions were asked. No difference was observed between the study condition and no question asked condition. These two variables were then combined, thus comparing the not asked/study condition to the quiz question condition. The tested yielded statistically significant results. Those students who were asked quiz questions at random moments throughout the recorded lecture performed better on transfer exam questions than those who were not asked to complete quiz questions (Griswold, Overson, & Benassi, 2017).

Video quizzing reinforces learning, promotes active retrieval, and creates meaningful learning when the demonstration of knowledge is coherent, organized, and integrated. Meaningful learning results in students being able to make inferences, solve problems, and apply knowledge (Karpicke & Grimaldi, 2012). Furthermore, the completion of video quizzes may further enhance a student’s ability to recall information and apply knowledge or skills in professional practices beyond the academic setting, due to its ability to require the student to retrieve information (Kovacs, 2016).

**Discussion**

This article provides college educators an overview of interactive videos including pedagogical support, technical recommendations, and models for how and when to use them. The two examples presented demonstrate different contexts in which faculty developed video quizzes were used in occupational therapy courses. In addition to practicing an active retrieval process through interactive video quizzing, some instructors may choose to provide corrective feedback immediately after each quiz question is answered. The two examples mentioned in this article applied immediate feedback quizzing for different reasons. Within the procedural video, immediate feedback was needed so that students would be prepared to operate the equipment during the lab. In contrast, the immediate feedback within the clinical reasoning video quiz allowed students to reflect on the clinical scene observed to reinforce the type of clinical reasoning being learned.

Advancement and development in web applications, software programs, and video hosting services are providing a variety of options for instructors to easily create and customize video content and quizzing features. As video usage rates continue to grow (Kleftodimos & Evangelidis, 2016), faculty need to maximize student learning from video. Video quizzing demonstrates one way technology can facilitate student engagement, reinforce concepts, and gather student feedback. As class sizes increase and technology advances, interactive videos may become a natural and sustaining component of college curriculums to promote student learning; therefore, further research is needed to understand when and how to apply this technology within the classroom.

**References**


Are you Kahooting, Plickering, or Apping? Information on How to Use These Interactive Technologies in the Classroom

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Are you Kahooting, Plickering, or Apping? These interactive technologies may be a pathway to create more engagement in the classroom. Instructors can use these new technologies to create quizzes and gain instant information on the students’ comprehension. Students interact more with the use of these applications and can receive immediate feedback. We describe how Kahoot! engaged students in one of our classes.

Introduction

In higher education, the use of instructional technology has been shown to have the potential to add value to the classroom (Little, 1973; Peled, 2000). However, implementation of such technology has been suggested to be based on eight key factors including: fear of change, training in basics, personal use, teaching models, learning based, climate, motivation, and support (Bitner & Bitner, 2002). Kahoot!, a game based learning platform, can be used at any time without requiring the creation of student accounts, which allows instructors to use it any day without planning. Previous work has shown that game-based learning is a best practice to engage students for reviewing class content (Icard, 2014). Icard also suggested that students gain valuable critical and problem-solving skills as well as dealing with success and failure in game-based learning (2014). Dellos (2015) used Kahoot! in secondary education classes and found the platform aided in identifying information gaps. Wang (2015) reported that 57% of their class wanted to play Kahoot! daily, whereas 94% wanted to play it at least once a week. Therefore, incorporation of a game-based learning platform such as Kahoot! could be more impactful if played routinely, but not daily. Plickers has also been used previously with great success. Wood, Brown, and Grayson (2017) reported that 98% of their students felt Plickers encouraged their learning in the course. Additionally they reported that 88% of their students hoped that other classes and instructors would use Plickers.

Doceri app allows the user to control their desktop or laptop from anywhere in the classroom using their iPad (Silverberg, Tierney, and Bodek, 2014). The teacher can also highlight information in the PowerPoint from the iPad. Kissel (2013) Doceri allows you to develop student-engaged, hands-on activities.

GradeCam app permits the user to use a document camera or webcam to grade true/false or multiple choice quizzes/exams. The score can immediately be displayed for the student to see or for only the instructor to see (Education Letter editors, 2012).

Plickers, Doceri, and GradeCam, along with peripheral devices, were demonstrated to career and technical education teachers in high schools and technical centers across Kentucky. The previously mentioned apps and devices have been used in various technical classrooms to aid in the instructional process.

Overview of Strategy, Approach, or Concept

Kahoot! is a game-based learning platform that can be utilized at all levels of education and can be tailored by the instructor. Kahoot! is easy
to use, as it only requires the instructor to create an account to create/access content. There is no cost to use the program. The instructor can choose to create their own content (e.g., quiz, survey, discussion, or jumble) or can search for an existing game. Instructors can provide a title and description, and control the visibility, language, and audience. Images or video can also be added for visual learners. For a quiz, questions can be added one at a time; multiple choice or true/false questions best fit the formatting provided. Creating a new Kahoot! is simple and doesn’t require much time, as you can add as many questions as you desire. Once you create a Kahoot!, you can review it prior to using it in class. Through the versatility of Kahoot!, an instructor can measure student competency without any elaborate or time-consuming effort. I found these traits especially helpful for my application of Kahoot! After you have created and saved the Kahoot!, it is available for use at any time by simply logging in. This was especially helpful as you could log in from any internet connected device to start a Kahoot!. Within a quiz, you have several modes to play in, classic or team. Kahoot! quizzes can be used by individual students or by groups, allowing the instructor flexibility. Results can be accessed at any point following completion of the Kahoot! by clicking on “My Results” located under your user name. Results can be downloaded into an Excel file or saved to your Google Drive. Kahoot! was utilized in an introductory level animal science course, Anatomy and Physiology of Livestock, that is taken by underclassmen for a program option or requirement. Kahoot! was used on a weekly basis for 14 weeks during the Fall 2016 semester at Morehead State University. In part, Kahoot! was used as a method to review material prior to an exam or quiz, along with a way to reward students that were actively listening and participating in class.

Plickers is a combination of an app and a set of cards with a number and a different QR code on each card. Plickers are commonly used for formative assessment (Krause, O’Neil, & Dauenhauer, 2017; Salladino, Simons, Burghardt, & Morris, 2017). Each card contains four possible answers depending on how the card is held. To use Plickers, you must download the free app to your Apple or android device. Next, you print or order a set of cards, then each card is assigned to a student. Class information can be setup in Plickers to record individual responses. The immediate feedback from the system will enable the user to determine if the students comprehend the concepts just presented (McClure & McAndrew, 2016).

Analysis

Kahoot! was observed to have a positive impact (compared to when the author taught this course previously) on the introductory course, as students retained more information when they reached the quiz or exam the following class period. Following my observations of competency of material during the Kahoot!, I also reviewed student performance through the saved results. I then tailored my next class period to address gaps in knowledge determined by the Kahoot!. Based on the use of Kahoot! in the classroom, one student in a post course survey reported: “The Kahoot! quizzes every week were extremely helpful and made me remember more of the material.” Another student stated “The instructor encourages her students to do well through healthy competitive competitions with quizzes using the Kahoot! program.” Outside of the course survey, students at the end of the semester based on the observation of the instructor, were more engaged and performed more successfully on quizzes and exams following Kahoot! quizzes.

When asking the career and technical teachers that were exposed to the apps and devices about using them in their classrooms, there were various responses. One teacher said “They were a great asset to my lessons, and the kids loved it too!” Another teacher commented “The use of the technology was a great way to keep the students attention.”

Discussion and Considerations

Through classroom observations, Kahoot! showed promise in increasing student engagement and success. Students eagerly anticipated the weekly Kahoot!, and the top performing students changed weekly. As the top student performers changed weekly, more and more students become more competitive. While some students were repeats in the top five, more often the top five
students varied. Several considerations must be made prior to incorporation into a new classroom including time allowance, level of course material, and classroom rules. First, depending on the number of questions utilized per Kahoot!, a reduction in available class time may outweigh the benefits. Secondly, the level of course material may not fit a multiple choice or true/false question format well, as further comprehension is needed. Thirdly, the use of internet-connected devices may be prohibited in some classrooms to reduce distractions. For higher education purposes, content must be created to follow the course outline, difficulty, and accuracy. For secondary education, it could be possible to skip creation of material and utilize previously saved public Kahoot! activities. Overall, Kahoot! is a useful competitive, interactive activity that will help student engagement and success.

GradeCam Education Letter editors (2012) state, “U.S. Secretary of Education Arne Duncan has stressed the need for better classroom productivity tools and encouraged schools to “do more with less.”” Kahoot!, Plickers, Doceri, and GradeCam, used as instructional aides to enhance the instructional process will help address this goal. Incorporation of interactive technologies in the classroom is recommended; however, teachers should select the method(s) that best match their classroom needs.

References
Little, J. C. (1973). The role of academic computer departments in the uses of computers in the undergraduate curricula at the two-year college level. Fourth Conference on Computers in the Undergraduate Curricula, Claremont, CA.
I Hear What You’re Saying: Bringing New Media Pedagogy to Basic Writing

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New media projects have yet to be widely assigned in Basic Writing classes. The authors collaborated on an audio assignment for students whose placement exams designate them as Basic Writers. The assignment introduces students to analysis through spoken-word reviews. Students’ dual role as producer and audience enhanced their sense of purpose and ownership. The authors provide a brief review of the benefits of new media projects in writing classrooms and put those findings in conversation with the needs of and sense of marginalization among Basic Writing students. The authors explain how their assignment invites students to connect their lived experiences with academic discourse, developing a sense of belonging and authority.

Introduction

Increasingly, new media projects in writing courses are used to teach skills and help students see themselves as producers of authentic texts, with meaningful ideas to share. However, new media pedagogy has yet to be widely applied to Basic Writing, or BW, courses. Problematically, BW students often enter the university believing that their experience, language, and texts have no place in the academy—a misconception a student-centered and engaged classroom can go far in correcting.

Responding to this disparity in access to new media instruction, in Fall 2016 the authors collaborated on an audio essay assignment for Introduction to Reading, Writing, and Rhetoric, a course for students whose placement exams designate them as Basic Writers. The assignment introduced students to textual analysis by way of a spoken-word song analysis. By recording an audio essay, the students’ dual role as producer (of an analysis) and audience (of the song) created an enhanced sense of purpose. The resulting texts demonstrated student ownership and analytical depth; the project introduced students to digital composing, enhanced their understanding of writing with purpose, and built classroom community.

Student Identity, Belonging, and the BW Classroom

Central to our project is the belief that BW students all too often experience a sense of being left out—out of the larger university community, out of credit-bearing classes, and out of learning opportunities provided to students whom placement exams have deemed “college ready.” Mack (2006) examined identity and language for working-class students. She suggests, “Working-class students frequently have problems imagining themselves as scholars. A rhetorical indication of this conflict is the self-effacing commonplacesthat working-class students feel obliged to incorporate into their writing to the effect that theirs is only an opinion or just their personal belief about a topic” (p. 53). Mack focused on the socio-economic position of her students, rather than the academic position, but since both positions point to a “non-traditional” university identity, the parallels with BW students are meaningful. Identity creates a barrier, and it is the instructor’s duty in the BW classroom to help create an academic identity by tearing down the barriers between what is “university material” and what is not.

Alongside Mack’s challenge to educators to create assignments that invite the experiences of working-class and other oft-marginalized students,
we see increasing BW student confidence with digital literacy as a complementary goal, one with a similarly liberatory agenda. Klages and Clark (2009) note the class and power implications of literacy education in general, linking it to digital literacy and the empowerment of BW students: “Just as literacy has always been linked to social, cultural, and economic power, so too does this new digital literacy mean access to our newest forms of cultural power. The digital divide is no longer about access to technology, but rather a more complex divide of those who have had the educational access, training, and critical engagement to use technology well as literate cyber-citizens” (p. 48). Finding common ground between Mack and digital literacy and new media scholars, our assignment design focused on the work done with new media in first-year composition and other writing classrooms, applying it to the BW classroom.

**Basic Writing and Technology**

Our work with digital composing in the BW classroom begins from the belief that digital production and attention to developing digital literacy is not only beneficial for student learning in composition classrooms, but that such attention is in fact a necessity given the pervasiveness of digital communication in today’s classrooms, workspaces, and social communities. When attempting to find other new media work in BW classes, we immediately noted the near-absence of published work. Other teacher-scholars working with Basic Writers have noticed the apparent void as well. Braun, McCorkle, and Wolf (2007) note that “unlike digital production in composition instruction in general, there has been no published research on digital media production in basic/developmental/remedial writing. There has been, however, published research on other uses of digital media in basic writing instruction, but the focus tends to be almost exclusively on diagnostic or supplemental applications... but not on digital media production as a composing strategy for basic writing classes” (para. 2). In working on our project, we likewise found ourselves working to bridge a gap in the scholarship of teaching.

While digital literacy as part of the composition curriculum has become widely accepted, there is also wide recognition that not all students have equal access to digital technology and digital literacy instruction. Vie (2007) explains the different “digital divides” within the United States. One view of the divide focuses on physical access to computers and the internet, what Vie calls the digital divide 1.0; in contrast she describes the digital divide 2.0 as one of digital literacy. As Vie explains, Millennial students may have greater access and surface facility with digital media, often outstripping their teachers in this regard, yet are unprepared in terms of engaging thoughtfully with those technologies. Vie writes, “Compositionists should focus on incorporating into their pedagogy technologies that students are familiar with but do not think critically about: online social networking sites, podcasts, audio mash-ups, blogs, and wikis” (p. 10). Our audio-essay, like the mash-ups Vie mentions, helps students to consider the ways technology expands and complicates their interactions with texts, creative options, and audiences, as well as reinforces the key textual/communicative practices of quotation, citation, and analysis.

Bandi-Rao and Sepp (2014) address the challenges many students face with acquiring academic literacies. They use digital storytelling projects to help basic writers become more familiar and comfortable with those literacies: “Many of our basic writers struggle with traditional literacies. Digital storytelling has the capacity to help basic writers use digital literacy as a way to transition into traditional literacies and academic discourse more easily and in a way they comprehend and feel comfortable” (p. 119). Our audio essay grew from a similar shared sense that such a project would help students feel more comfortable entering academic discourse while introducing them to and building their confidence in working with digital modalities.

In a similar vein, Rankins-Robertson, Cahill, Roen, and Glau (2010) explore ways of expanding students’ understanding of what “counts” as academic discourse, or what is valued or deemed “worthy” of consideration within a college classroom. They write, “First-year composition classrooms, particularly basic writing classrooms, offer a starting place for helping students to develop a more robust understanding of academic discourse and academic literacies. When writing assignments are designed with this goal in mind, instructors have the opportunity to challenge and socialize students into academic ways of knowing that can transcend the
classroom” (p. 58). Rankins-Robertson et. al. asked their students to construct their projects with a wider audience in mind—not just to write for the teacher—and to deliver it digitally as a YouTube video. They found that “This project allowed the student to grasp a strong sense of audience-appropriate content and develop a purpose-driven product” (p. 67), a result we found in our own project, and one that is common for digital projects that are presented within the classroom or to even wider audiences.

Bandi-Rao and Sepp (2014) and Rankins-Robertson et. al. (2010) emphasize valuing topics, genres, and modes of expression that are not traditionally seen as “academic.” They emphasize, and we agree, that such projects empower students and help them to develop literacy skills valued in traditional classes, the workplace, and community. As instructors, it is important to keep in sight that what we value or allow in our classes, what we validate by spending learning time on, sends a message to our students and shapes their perspective of who “belongs” in college.

Finding Voice: Audio Editing in the BW Classroom

Being mindful of Mack’s (2006) issues of belonging and identity, we shaped an assignment designed to encourage and challenge our BW students to understand rhetorical analysis, a genre of analytical essay often assigned in first year composition. The benefit for BW students in completing a rhetorical analysis is that it allows examination of the chosen text on two fronts, the position of the reader and the position of the writer. As instructors, we want our students to put themselves in these positions, something difficult for a student population who often feels it exists outside of the realm of the university. These students require a classroom that is sensitive to their evolving identity as a scholar and student.

Importantly, Mack (2006) locates the students developing identity as central to their academic success: “It is my contention that working class students need writing assignments in which they can occupy an authoritative position in relation to their topic. If they are to survive at the university, working class students must construct a position that is not discounted as underprepared or limited to an acceptable imitation of the elite original but a respected, working-class academic identity” (p. 54). Most instructors see their students enter classrooms with headphones on every day. Music and songs are a source of meaning for all college students. In creating an assignment that positions a song on a student’s iPod as a text “worthy” of academic study, we are suggesting that the person who selected that song is worthy as well. By allowing students to choose songs for rhetorical examination, they claim authority. A song heard every day is a text known intimately; it reflects a student’s point of view, language, emotional state, and social position. It allows the student to consider the writer and the audience through a lens of familiarity rather than difference. Furthermore, music allows examination of rhetorical terms. Music has a rhetor and an audience, fits into a genre, and employs specific language targeting the intended audience. While much could be achieved by asking students simply to analyze a song as part of a traditional written essay, scholarship on digital composing and multimodality suggests they would gain even more if enabled to create an audio text, as this would allow them to more fully engage with a musical text and provide new ways for the students to communicate with their audience (see Palmeri, 2012, pp. 54–57, 60).

To accomplish our goal of crafting an assignment that would help students develop rhetorical power and become more knowledgeable about digital literacy and confident around new media tools, we needed software that a student could have easy and free access to. It would need to be both Mac and Windows compatible and ideally have only a slight learning curve. Advanced software such as WavePad or Adobe Audition is expensive and difficult to learn. Fortunately, the software Audacity (www.audacityteam.org) satisfied our requirements; it is free and easy to use. Very few students had difficulties working with the software, based upon feedback. Working with the media team at our university’s Communication and Writing Studio, students were taught how to use Audacity with multiple workshops, handouts, and an instructional video. While campus computers did not have Audacity installed (and with no way to install without an administrator), all the computers within the Noel Studio were loaded with the software to ensure that students without a personal computer would have a dedicated space to work on their project. Students
with personal computers could access the software freely, while those without a computer had access and support through the Studio. With the hurdle of technical access cleared, the way was open for students to begin exploring the connections between textual analysis and creative expression in their own, individually affirming project.

Connections between self and text, audience and author, are made more apparent in the audio essay format than in a traditional rhetorical analysis. Each student wrote the script for their essay first, making sure to connect their claims to the song. This writing already anticipated how the student would blend their voice and words with the words and sounds of the song they were analyzing. They used lyrics and noted sounds and rhythms from the music to support the claims they made. This process made the academic writing principle of supporting claims with evidence, often an abstract concept, into something concrete.

In recording and mixing their essays, the student had to deconstruct their essay and song and rearrange them into something coherent and meaningful. An added benefit of Audacity is that it allows students to see and make connections between their ideas and the text, between claims and evidence, physically. As one of our technology consultants suggested, it’s like building with Legos: the claims (the bottom row of the waveform in Figure 1) fit into the sounds and lyrical content (the top row in Figure 1). Composing this way, students see their argument taking form as they make it, as well as hear it.

The assignment culminated in a class listening party. The students’ awareness of their audience was heightened—there was more at stake as everyone had to share their work. The connection between audience and rhetor became real for the students. We all were required to pay attention to the point of view of each person in the classroom; we were allowed to see what that person values and understands; we heard their voice as a person and as a writer. Listening democratizes the project and reinforces that everyone has a place at the academic table. Yet, listening made the students feel vulnerable—students are often self-conscious about how they sound and what they have to say. By insisting that all deserve respect and equal time, we demonstrate the ideal university. In the finished projects, we heard our students develop Mack’s (2006) “respected, working class identity” in their own voices; in the essays they built and recorded they claimed an academic space and identity for themselves.

Our assignment gave the students access to bigger ideas and bigger stories. Often instructors spend hours of classroom time attempting to establish connections between what they study and the world their class inhabits. Our students made those connections themselves when creating their audio essays. They made connections between their own lives; they made claims about race, class, gender,
and sexual identity. They reflected on contemporary politics, on mental illness, on family dynamics, without being led by the instructor. The student’s own sense of authority over musical texts allowed them to access deeper connections between language and people. Their understanding of audience and authority compelled them to make bigger claims about what they understand and believe. The rhetorical analysis assignment is often an abstraction for new college writers, but the audio essay allowed these students to understand why it is so important to share how we read texts and more centrally, what these texts have to teach us about ourselves as human beings. Basic Writing students benefit from this broader understanding of the point behind the process, and this leads them to feel more welcome at the university.

References


Tabletop Games and Creativity in the Classroom: Reflections from the 2017 Pedagogicon

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Students in the 21st century face a new set of challenges throughout academia and as they proceed into the workplace. As instructors, we must aid our students in developing the skills of adaptability and creativity, and to achieve this goal we must engage students with unfamiliar technologies and innovative teaching strategies. In thinking about how to incorporate low-tech tools in the classroom, we decided to focus on tabletop games, as they are less prevalent in existing higher education research. As students are unfamiliar with the practice of using tabletop games to learn in a formal environment, the introduction of these tools challenges students to develop the ability to adapt to unusual circumstances and the creativity necessary for succeeding in academia and beyond.

Introduction

Students in the 21st century face a new set of challenges throughout academia and as they proceed into the workplace. As instructors, we must aid our students in developing the skills of adaptability and creativity, and to achieve this goal we must engage students with unfamiliar technologies and innovative teaching strategies. In thinking about how to incorporate low-tech tools in the classroom, we decided to focus on tabletop games, as they are less prevalent in existing higher education research. As students are unfamiliar with the practice of using tabletop games to learn in a formal environment, the introduction of these tools challenges students to develop the ability to adapt to unusual circumstances and the creativity necessary for succeeding in academia and beyond.

Games and the 21st Century

The rise of “globalization, technology, and competition” (Olivant, 2015, p. 115) presents a variety of new challenges for which 21st century students must be prepared. The rapidly evolving nature of digital technologies quickly renders skills related to specific content obsolete, requiring students to develop “enhanced skills of adaptation, flexibility, initiative, and the ability to use knowledge in different ways than has been hitherto realized” (p. 117). As Dusenberry, Hutter, and Robinson (2015) explain, the ability to adapt to new technologies is the most valuable skill for students to carry with them into the workplace (p. 302). While many jobs offer additional training to assist employees in engaging with changing technologies, employees “must possess the adaptive skills that can be enlisted to benefit from the training” (Levin, 2015, p. 140). Therefore, while instructors cannot prepare students for every challenge they will meet in the workplace, facilitating adaptability will enable students to develop the abilities they will need to continue learning and evolving beyond higher education.

Students must be challenged in the classroom in order for them to practice the important skill of adaptability. Multimodal activities are ideal for this purpose, as they help students both “confront the unfamiliar” and engage as “conscientious mediators” (Dusenberry, Hutter, and Robinson, 2015, p. 303); both activities are central features of adaptability, as students must learn to employ new technologies as well as modify information to best suit a particular audience or audiences. Students develop ingrained ideas about classroom activities and learning throughout the process of their education, and will likely be uncomfortable when confronted with new media and modes (Dusenberry, Hutter, and Robinson, 2015, p. 304). This discomfort is invaluable in challenging students’ understanding of learning and
developing their ability to adapt to new situations and technologies. Experience using certain learning materials like physical and digital manipulatives can better prepare learners to solve problems even when they are required to use different resources (Okita, 2014, pp. 845-6). Students who must engage in unfamiliar learning activities “learn how to learn” (Dusenberry, Hutter, and Robinson, 2015, p. 305), an invaluable skill for the 21st-century workplace.

Concomitant with the need for adaptability is the necessity for 21st-century students to develop creative thinking skills in order to thrive in and beyond higher education (Olivant, 2015, p. 116). As Resnick (2007) relates, “In today’s rapidly changing world...[s]uccess is based not only on what you know...but on your ability to think and act creatively” (p. 18). Not only must students be able to adapt to unfamiliar tools, but they must be able to think creatively in using these tools to solve problems.

In order for students to practice creative thinking skills, they must be truly engaged in classroom activities. Such engagement “results from working with unfamiliar modes of expression” (Anderson, 2008, p. 52). Experimenting with novel media and technologies facilitates a “sense of creativity,” which can lead to student motivation (Anderson, 2008, p. 44). Increased motivation enables students to attain the autotelic experience, or flow, which is paramount to the development of a creative skill set. Flow is “characterized by deep concentration, a focus on a clear goal, [and] a diminishing awareness of time passing” (Gardiner, 2017, p. 3). Familiar tasks and technologies fail to challenge students to the extent needed to lead to flow (Anderson, 2008, p. 44), as only an “optimal match between skill and challenge” (Gardiner, 2017, p. 3) can facilitate and maintain the state of flow. Additionally, the so-called “Net” generation of students particularly benefit from creative, multimodal learning activities, as they “thrive on the utility of technology, creativity, social interactions and community” (Edwards-Groves, 2011, p. 52). The incorporation of novel classroom activities and media is therefore invaluable in attaining student engagement and developing creative skill sets in 21st-century students.

Digital or Analog?

When considering including novel technology or multimodal texts in the classroom, there is often the understandable draw toward digital technology and high-tech options. Many scholars have commented on the utilization of digital games in classroom activities (Alexander, 2009; Apperley, 2007; Chee, Mehrotra, & Liu, 2013; Gee, 2013; Foster & Shah, 2015; Pivec, 2007; Williams, 2014). Although Pivec (2007) noted the relatively low numbers of instructors willing to utilize games in their courses, many instructors have now begun incorporating digital games, which have been shown to improve learning in and outside of the classroom (Mozelius, 2014), into their curriculum. However, it is important to consider low-tech options when looking for multimodal tools that may inspire creativity and teach adaptability to students. Pivec (2007) also contends that incorporating digital games provides instructors the opportunity to “reach” students with a familiar medium (p. 389). Students are likely also familiar with tabletop games, generally a more low-tech option; as stated above, utilizing a familiar medium in a different context will provide students with a potentially novel experience, encouraging deep learning as students apply their skills and knowledge to that new context.

Incorporating low-tech options such as tabletop games allows students the opportunity “to inquire and explore” in a low-stakes environment (Mayer, 2011, p. 48). Pierce (2016) explored the forgotten late 19th- and early 20th-century history of library youth services’ incorporation of games into their youth spaces to encourage play and learning, noting that though games are still thought of as a novelty, they have long been utilized as part of the educational process (p. 376). Wingfield (2014) of The New York Times claims that sales of board games have continued to grow and that recent Kickstarter campaigns for board games have “exceeded the [fundraising] amount for video games” (par. 6), and Sardone and Devlin-Scherer (2016) claim this resurgence as their motivation for including board game design in their teacher education classes (p. 216). This resurgence of interest in tabletop games signified to Sardone and Devlin-Scherer (2016) that students may be also be gaining interest in games, so they wanted to provide future teachers with the tools to incorporate those games into their classrooms.
Games as Directed Play

While providing potentially novel experiences to students encourages their creativity and adaptability, using tabletop games in a learning environment also grants students the chance “to have fun while they are playing and learning” (Crews, 2011, p. 13). We often encourage learning through play in younger students, but Piaget (1973) believed that too much “unsupervised liberty” would result in play that did not provide any “educational benefit” to learners (p. 6-7). Because of this belief that learners may not benefit educationally from undirected play, many instructors and companies began creating games specifically for the purpose of learning. For example, many tabletop games for younger learners, such as HiHo! Cherry-O market themselves as “so much fun” learners “don’t even realize they’re developing and practicing… skills” (Hasbro, 2017). However, instructors should not feel obligated to stick to utilizing games intended for learning specific skills. Though it may seem as though utilizing games designed mostly for entertainment may result in the “unsupervised liberty” Piaget spoke against, instructors should feel comfortable incorporating such games into their classes. If instructors choose games that they believe will benefit their students’ learning processes and they provide the necessary direction—whether by explicitly stating the purpose of playing the games or by giving students a specific goal they should meet through play—students will likely benefit from the incorporation of games into the classroom whether or not the game is marketed for learning.

Games as Peer Instruction

Tabletop games can be an important tool for facilitating peer learning and interaction. When students are presented with games, they must first read and understand the rules. Many times, this results in one student reading the instructions aloud or reading silently and then explaining the rules to other players. In addition, throughout the game students will need to remind each other of certain rules or engage in group policing when one player attempts a move that is not sanctioned by the game rules. These interactions enforce the idea that learners have valuable potential for instructing their peers, and thus such activity can emphasize the important role that students play in the class by centering the instructor.

Games such as Fluxx (Looney, 2014) also require that players remain adaptable throughout gameplay. In Fluxx, players begin with three cards and use these cards to change a rule, complete an action, add a new goal to the game, or attempt to complete the existing goal. Goals are accomplished when one player plays the relevant cards from their hand. When students play Fluxx, they must not only be aware of the original rules, but also keep in mind the changing rules and goals that develop throughout the game. Students can again act as a policing force, holding other players accountable for the evolving gameplay of Fluxx. This interaction encourages students to be adaptable and also take ownership of their learning, particularly when gameplay is combined with a goal for the course.

Because we teach composition courses, one of our main goals is to teach students how to communicate effectively. This objective includes employing creative means of expression and considering others’ perspectives. The Six-Word Memoirs (University Games, 2011) game involves players working in pairs. Each player within the pair is given a card that lists various topics and must write exactly six words to describe each topic before the timer runs out. One player will then read their six-word descriptions to their partner, who must guess the topic based solely on those six words. The Six-Word Memoirs game requires players to think creatively in order to meet the six-word limitation while still adequately describing the topic. Should players fail to use exactly six words, they are not permitted to read their description aloud. Student players will again need to engage in policing one another to ensure that descriptions over six words are not used. In addition, players must consider their partner’s perspective in order to develop a description with which their partner will be able to guess the topic.

These two examples can work well not only for composition, but a variety of disciplines. Most tabletop games will require students to engage in peer instruction and interaction and can be used to accomplish various academic goals. By asking students to engage with tabletop games, we are also requiring them to take ownership of their learning processes. Therefore, the inclusion of tabletop
games in classroom instruction presents a myriad of benefits beyond mere play.

**Barriers to Gaming**

Of course, the potential difficulty of finding resources to purchase or obtain games for inclusion in instruction must be considered. Finding resources for high- and low-tech options may be difficult; however, if instructors already own tabletop games, they may be able to find games in their own collections that will work well in their courses. Many libraries have tabletop games available for check out, so instructors should consider the board game collections available to them from other (potentially free-to-use) sources if they do not have the resources available to purchase games for use in their courses. Resources may be particularly difficult to find if instructors want to incorporate games into large classes. Breaking a large class into several smaller groups can ensure that each student is participating in the activity; however, instructors of large classes must still contend with the difficulty of acquiring necessary resources (i.e., multiple games for a large class).

**Conclusion**

In addition to more course-specific academic goals, instructors in the 21st century must facilitate the development of creativity and adaptability in their students. One manner of doing so is by introducing tabletop games within the context of specific lessons, which can work to not only illustrate concepts but also encourage peer instruction and ownership of the learning process. While resources can sometimes be costly to obtain, there are opportunities for instructors to acquire tabletop games that can overcome the obstacle of prohibitive expense. The act of play is ultimately an act of learning, and students are never too old to join the fun!

**References**


Sustainability through Digital Pedagogy

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While this article focuses primarily on learning objectives that ultimately lead to profound change through an emphasis on process over product, the notion can expand to include not only what is taught, but how it is taught, and how this affects learning. With this, digital technologies present a conduit through which educators can engage students while also regarding and expressing concern for the three pillars of sustainability.

Introduction

Sustainability … is a term that has various forms with even more definitions and applications, especially in higher education, as indicated by the 836 institutions that participate in the Association for Advancement of Sustainability in Higher Education (AASHE) Sustainability Tracking, Assessment & Rating System. For instance, a business educator might talk about it in relation to a company’s triple bottom line, whereas design education understands it in relation to the life cycle analysis of a building or materials. Yet, while many classes talk about sustainability, how many educators practice what they teach? As Parker (2012) indicates:

While colleges and universities are often at the forefront of major social changes, and while it is true that academics have contributed a great deal to our overall understanding of the need for sustainability, the commercial and public sectors have, in many respects, out-run education in making their day-to-day operations more sustainable. (p. 1)

The following framework and discussion aims to engender meaningful learning through the three pillars of sustainability and digital processes to positively impact 21st-century education.

Background

According to the National Center for Education Statistics (NCES), of the 20,207 students who attended degree-granting postsecondary institutions in the year 2014, there were 17,293 undergraduates. However, 10,784 of these students were considered full-time, while 6,509 attended part-time. Continuing this illumination of a diverse demographic, a study by U.S. News (2016) found that, in the same year across 247 universities, an average of 19% of freshman lived off campus or commuted. Issues relating to social and economic sustainability arise when considering that, because not all students live on campus, some spend time and money to drive and/or park for class, while others might have families, jobs, or responsibilities in addition to coursework.

Increasing the impacts of education on the three pillars of sustainability, Kingkade (2014) reported for the Huffington Post that, at a rate of about 812 percent more than the year 1978, “College textbook prices have increased faster than tuition, health care costs and housing prices, all of which have risen faster than inflation.” Highlighted by this statistic, not only do textbooks have an economic impact, but there is also an environmental impact in relation to the amount of natural resources needed to create them (not to mention subsequent revisions). In a similar vein, the Office of Sustainability at Boston College indicates that the average college student creates 320 pounds of paper waste each year. While species and paper type play a role in this equation, conservatree.com estimates that one tree can make 8,333.3 sheets of standard copy paper. Based on this information, if an educator prints a five-page syllabi for a class of 50 students, the equivalent is 3% of one tree. While this might not seem like much, consider that most educators teach more than one section or more than one course.
per semester...over multiple semesters...alongside innumerable other educators on campus...etc. But this does not even include the amount of paper needed for handouts, tests, or assignments. Some may question the environmental footprint of using paper versus electronics, but Pettibone and Bartels (2012), analyzed their own pedagogical practices to determine a rough estimate, wherein:

The carbon footprint of manufacturing one Dell laptop is approximately 770 pounds of carbon. By contrast, the carbon footprint of printing one ream of paper is 18.5 pounds. But given the sheer number of pages printed and copied, our estimated carbon savings for our first year is estimated to be 3,000 pounds (p. 183).

Hence, the amount of paper consumed for educational purposes adds up quickly. In an ironic contrast, the earphones, mobile devices, and moving thumbs visible when walking across a college campus signify an undeniable embeddedness in technology and the amount of time students spend plugged in.

As a design educator, this phenomenon struck me when I began to notice the amount of waste created by my studio classes. These project-based courses are foundational to the program, but through sketchbooks, ideation models, material samples, and presentation boards, all of which are typically discarded in favor of digital portfolios, I began to wonder how I could capitalize on technology to teach in a more sustainable manner. The following section provides select examples of ways I employed digital tools in a variety of courses with diverse topics, meeting styles, and grade levels.

While the intention of this paper is not to negate the validity of holding class in a university space, or using textbooks and paper, I believe an understanding of the technologically entrenched 21st century students with unique means, lifestyles, and accessibility should encourage educators to think differently about course delivery and deliverables. By utilizing digital pathways as a means for meaningful and transformative sustainable learning to occur, “classrooms” have the potential to become an active place for change, not just in beliefs, but more importantly in behaviors.

Methods

Open Educational Resources

According to the United Nations Education, Scientific and Cultural Organization (UNESCO), open educational resources (OERs) are universally accessible teaching, learning, or research materials within the public domain. Composed of primarily digital options, OERs present an opportunity for educators to not only reduce costs incurred by students for standard course materials, but to create textbook alternatives that provide a wider range of current information by diverse scholars, while reducing the consumption of environmental resources required for textbooks or printed supplies. For instance, I used OERs in a third-year Interior Finish Materials course through a strategic hybrid framework. After giving a lecture on the importance of specifying materials based on performance properties and characteristics with regard to user health, safety, and welfare, students were asked to remotely read an article from the NFPA Journal (2014) paired with an article, by Setser (2010), regarding failure of interior finishes, and a Today Show report (2016) to visually express how materials contribute to the ignition and spread of fire. In an anonymous midterm evaluation, when asked what they liked best about the course, one student (2016) commented: “The interactiveness. Rarely a repeat day, which makes it fun + I pay attention + learn more.”

Design Drive

Acting in tandem with open-educational resources, platforms like WordPress or Omeka allow curation of specialized information. Supported by an internal university grant, I created a single-source, online database for sharing information, news, research, and trends pertinent to the discipline...an online design encyclopedia. As an open-source collection of links, videos, lectures, images, etc., the site will be a resource for courses in the program and encourage faculty to innovate using digital technology. For instance, one professor might create and share a video about concrete, which illustrates how it is made and how it can be used. A history course could then use this video to introduce the concept of concrete and indicate how it has changed since Ancient Roman times when it was originally created. Then, a construction
methods course, could reference the same video to illustrate the structural capacity of concrete.

By organizing and streamlining information the Design Drive can ensure that students as well as faculty have regular access to information. What is more, the database provides faculty with an enhanced opportunity to collaborate and share information creating a culture of sustainability through enhanced longevity of resources and reduced consumption of environmental resources.

**Online Content**

The wealth of information that exists online is undeniably extensive; it is simply up to an educator to think about the course and its content to determine what has the capacity to facilitate learning and potentially transport students beyond the classroom. In relation to this method, one student (2017) in a first year history course with a hybrid and multimodal delivery anonymously noted: “I learned how to look at things different. The material and teaching style of this course was great and I feel that I learned a lot.”

In an example from this course, I created a set of assignments to try to help students understand the Ancient Roman Colosseum in terms of material and experience. First, I gave an in-class lecture on stone and concrete, discussing their material properties and revealing the fact that the Ancient Romans created concrete due to their access to volcanic ash as an aggregate. I then discussed the Colosseum as an exemplification of how concrete was able to create new structural typologies which allowed for new experiences. Because “experience” is one of the most important aspects to teaching and understanding the physical world and interiors, yet few students have or will have an opportunity to travel to the Colosseum, I asked the class was to visit and explore two websites, both allowing for virtual, self-directed, 360 degree tours: one of the ancient Colosseum (http://74.220.219.72/~thrdhis1/ GladiatorsiPad.html) and the other of the Colosseum as it exists today (http://www.airpano.ru/files/Italy-Rome-Colosseum/2-2).

**Social Media: Pinterest**

In an effort to continue to engage 21st-century students, educators need to consider other online resources. According to a report by Perrin (2015) on social media usage, the Pew Research Center determined that 90% of Americans age 18-29 as well as 77% of Americans age 30-49 use social networking sites. What is more, the study found that: “Those who have attended at least some college are more likely than those with a high school diploma or less to use social media, a trend that has been consistent since 2005.” As such, utilization of social media not only has the potential to enhance course material, but to allow students to connect with one another and to a broader population. These sites also act as a resource to help students become better consumers and creators of online content while developing a repository of information that can be used during class, in subsequent course offerings, and throughout a student’s education.

The image-centered user interface of Pinterest, for example, has the capacity to serve as a medium for various modes of student engagement and pedagogical processes. To test this, I incorporated the site into two different courses with distinct intentions. In the previously mentioned third year Interior Finish Materials course, I created a class Pinterest board (https://www.pinterest.com/helen2868/in-a-material-world/) and invited all students to be “collaborators”. Because materials impact all human senses, the most prominent of which is sight, I required weekly posts to encourage the sharing of information regarding interior finish materials through imagery. Functioning beyond the possibilities of a blog, this caused them to not only pay attention to the image selected, but the limited characters as well. Separately, when deployed in a third-year studio focused on the design of a sustainable pavilion, Pinterest became a resource for the curation and sharing of research. The class was divided into groups and each collaborated on a different board with a unique topic (eg., https://www.pinterest.com/helen2868/water/), using them to find, post, and share research and imagery, enabling outcomes to be contained in one location and making these easily accessible by all throughout the duration of the project. Of this experience, one student (2014) made the anonymous comment in a course evaluation: “Awesome job implementing new research techniques like pintrest!”

Beyond student energy, Pinterest offers a method of sustainability in its ability to live on beyond the end of a semester as successive classes
continue to pin, and its exposure to a broad network allows users outside of the course and the university to follow it.

**Apps: LapseIt**

While Nahorniak (2012) for socialmediato-day.com reported that a majority of students’ time may be spent on social networking sites, a wealth of virtual platforms, information, and experiences exist that enable modification of traditional classroom information delivery to one that embraces technology as a vehicle. In 2014, a study by Baylor University found that college students spend an average of eight to ten hours per day on their cellphones. While the article noted that this could be detrimental to academic performance, it might also be possible to harness this interest to enhance learning. For example, in the first-year history course mentioned earlier, I asked students to download Lapse It, a free time-lapse and stop-motion camera for any mobile device. In an effort to encourage them to notice intricacies of the designed world, students received instructions to document their experience of an environment by creating a time-lapse video. The final products were put to music and shared on the students’ individual blog sites that were created for the course. In an anonymous course evaluation, when asked what they liked best about the course, one student (2017) commented: “Having resources that were available to me outside of class was helpful.”

**Discussion**

While pre-existing familiarity and interest in the digital world seems to increase student enthusiasm, use of technology also has its drawbacks. First and foremost, technology is never without fail and educators need to be prepared with a back-up plan. When possible, it is helpful to test the technology and the assignment before giving it to the students to ensure it is possible and, in turn, provide instruction or troubleshoot when necessary. It is also not advantageous to assume that just because most students are familiar with technology that they know how to appropriately use it. As such, some methods or assignments will need to accommodate a learning curve, for both the educator and the student. Alongside familiarity with technology comes perceptions, misconceptions, or biases about certain sites or methods, which the educator may have to correct or explain. However, it is also necessary for the educator to ensure that the digital technologies being deployed are safe for the students, themselves, their programs and the university. For instance, when preparing for the Pinterest assignments, I created an account separate from my personal account and indicated to the students that they could do the same, a method which can also be used with sites like Instagram. With these sites and the educator acting as moderator of the group boards, it is also possible to curate and, if necessary, discard inappropriate posts and/or followers. Lastly, while initial implementation into a course is more time consuming than specification of a textbook, once the digital processes have been identified and deployed, there is potential for a more stimulating and sustainable experience.

**Conclusions**

Just as the 21st century student body cannot be categorized by one profile, all three pillars of sustainability must be considered to create more impactful and transformative learning opportunities. As Sipos, Battisti, and Grimm (2008) attest: “If our collective goal is a more sustainable present and future, we must manifest, encourage and impart values that contribute towards that goal” (p. 70). While this article focuses primarily on learning objectives that ultimately lead to profound change through an emphasis on process over product, the notion can expand to include not only what is taught, but how it is taught, and how this affects learning. With this, digital technologies present a conduit through which educators can engage students while also regarding and expressing concern for the three pillars of sustainability.

**References**

Association for the Advancement of Sustainability in Higher Education. (2016). STARS Participants & Reports. Retrieved from https://stars.aashe.org/institutions/participants-and-reports/


Community of Practice: Creating Authentic Activities for Meaningful Discussions in Online Courses

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The community of inquiry model highlights the importance of student engagement in meaningful interactions with the instructor, course content, and classmates. Careful design of meaningful activities and purposively selected technologies such as Tiki-Toki, StoryJumper, and ThingLink combined in an online course to create collaborative projects that could be used outside of the classroom. Follow-up discussion prompts led to reflective and substantive interactions aligned with desired course outcomes and the development of “professional communities” among students.

Introduction

A prominent paradigm in online course development is the community of inquiry (CoI) framework (Garrison, Anderson, & Archer, 2000; Garrison & Arbaugh, 2007), which defines three forms of interaction that are necessary for a successful online education experience: interactions with the content (also known as cognitive presence), interactions with the instructor (teaching presence), and interactions between students (social presence). This model has proven very beneficial in helping scholars to categorize and research the effects of online features (Garrison & Arbaugh, 2007) as well as in providing a protocol for the development of online courses. However, it fails to give specific directions for fostering the three forms of presence or improving student learning. Brown (2006) offered some concrete strategies for teaching in the 21st century that ultimately suggest online learning environments should be communities of practice (CoP) as well as communities of inquiry.

Brown’s (2006) main premise states that 21st century technology requires more active forms of learning. Past technologies emphasized one-way transmission of knowledge, but the web 2.0 has introduced a wide range of interactive capabilities, leading to greater emphasis on student production and knowledge generation. In traditional education, students were engaged in “learning about” a topic; however, Brown contends that modern education should adopt a “learning to be” approach where advances in technology immerse students in opportunities to use what they know. The goal is to bridge the gap between knowledge and knowing. Successful online courses move away from the traditional supply-push paradigm of education, which stuffs students full of knowledge and information that they will use at a later date, to a demand-pull approach that draws students into dynamic learning environments built around a practice.

Community of Practice Model

Brown’s emphasis on engaging students in authentic practice is tied to modern advances in technology, yet it draws on the theoretical concepts defined in the CoP model, which Lave and Wenger (1991) based on their analysis of apprenticeship programs. Apprentices, they determined, engage as peripheral members of a community centered on a set of shared problems or interests. As participants interact in an ongoing and social manner, they give new meaning to existing thoughts and actions, creating a true relationship between theory and practice. Members learn from each other and share their expertise with newcomers, causing the practice to evolve. Practice in this context is defined as “a shared history of learning” (Wenger, 1998, p. 120). This concept is inherent in professions such as medicine and law whose practitioners strive to develop thriving practices. In the area of educa-
tion, the community of practice provides a similar opportunity for authentic participation which fosters refinement of the practice and growth among participants.

The members of the CoP are essentially co-creating their work, and they do so through the dual processes of participation and reification (Wenger, 1998). Participation is the regular involvement of members in shared activities through dialogue and action. As members participate, they negotiate meaning and then give tangible form to the knowledge that develops through reification. Reification is the embodiment and solidification of meaning through things such as shared stories and vocabulary, established protocols, and written artifacts (Wegner-Treyner, 2012). Reified knowledge is not static, however. Members of the CoP use, reflect upon, and refine artifacts as they continue to participate in the life of the community. In a thriving community of practice, participation and reification must be balanced. They complement one another in recursive and cyclical ways. When members participate without reifying their practice, the community becomes unfocused and unstable, overly susceptible to change and lacking consistency. On the other hand, a reified practice that is not open to change through participation is overly fixed, causing the community to lose its adaptability. The practice soon becomes outdated and meaningless (Wenger, 2010).

In addition to the community processes of participation and reification, Wenger (1998) has identified three essential dimensions of practice: mutual engagement, a joint enterprise, and a shared repertoire. The first dimension of practice in the CoP model, mutual engagement, aligns with the COI framework in its emphasis on student interaction with content, the instructor, and one another. However, in the CoP model, mutual engagement takes on a deeper meaning; it becomes an essential dimension in the coherence and maintenance of the community (Wenger, 1998). More than merely “mutually engaging” in the course, or even in a group project, mutual engagement requires that opportunities are provided in which individual members make complementary contributions and demonstrate overlapping forms of competence as they work together to create a product. Through these processes or “practices”, which can at times give rise to disagreement, challenges, and/or competition, relationships are created and strengthened. Members are diverse and unique, and each shares responsibility for the final outcome. Therefore, mutual engagement becomes an essential element for success. Joint enterprise represents the second dimension of practice vital to the formation of a community. It is the intended outcome of the community and emerges from a process of shared negotiation of meaning. The joint enterprise is defined by the participants through their mutual engagement in practice and creates mutual accountability (Wenger, 1998). Creativity occurs within the parameters of an assignment and belongs to all members, thus ensuring that no two enterprises will yield the same result. The final dimension of practice within the CoP is a shared repertoire of resources. As mutual engagement takes hold and joint enterprises emerge over time, a repertoire of dynamic and open-ended resources for negotiating meaning is developed. Not restricted to tangible items or artifacts, the repertoire provides members with access to numerous concepts, tools, routines, etc. created by the community and which promote continued reification on both an individual and group level.

**Applications to Course Design**

The dimensions of practice set forth by Wenger (1998) interact during the formation of a community and need not be explicitly separated to facilitate the negotiation of meaning. However, in seeking to introduce the concept of Community of Practice into coursework for an online graduate teacher certification program, the authors, who served as instructor and instructional designer for courses, were intentional in designing assignments which emphasized particular, individual dimensions in required courses. In all cases, the central focus of the design was on meeting learning outcomes by treating students as members of a community of practice and giving them authentic work to do which they could apply directly to their current or future profession. Students participated in the community through this work and reified their knowledge through the creation of tangible products, followed by reflective discussions that allowed them to continue the process of negotiating meaning around the work they had produced. While keeping student learning outcomes at the forefront and selecting
appropriate technology, the assignments helped to foster the sense of community and promote higher thinking skills around the content.

**Mutual Engagement**

In a required course for special education teacher candidates the authors created a group case study requiring mutual engagement which allowed candidates to demonstrate their understanding of the connection between specific disabilities and language development. Following a review of background information on a number of children with various disabilities, candidates selected a case study to pursue and became members of a group charged with identifying the possible impact of the selected disability on language development and classroom performance. They then created goals and suggested appropriate instructional strategies and accommodations for their selected student. To successfully complete the task, candidates self-assigned roles and made complementary contributions to a shared wiki page. Using a single image provided by the instructor, candidates consolidated content in the form of links, videos, or text, which they added to the image as tags through ThingLink (https://www.thinglink.com/), a free online tool designed for the creation of interactive images. The picture provided the platform or means through which candidates could synthesize information about different components of language and present it in a nonlinear format. Though mutual engagement was the primary focus, joint enterprise was also incorporated by requiring a contributions page to ensure accountability. Likewise a shared repertoire of goals and strategies emerged as groups reviewed and discussed each other’s wiki pages.

**Joint Enterprise**

Within a graduate level survey course on the history of deaf education, joint enterprise was used to create an assignment that could help candidates understand the historical development of the field based upon an authentic need to be able to recall and summarize key historical events on the Praxis exam, a requirement for teacher certification. Rather than simply taking a test on memorized information, candidates worked together to create a timeline that they could later access outside of the course as study prep material for the Praxis. The timeline was created using Tiki-Toki (https://www.tiki-toki.com/), web-based software for developing interactive timelines. Using a low cost educator’s account, the instructor created the base timeline with a backdrop and description and provided candidates with a password to edit the timeline. As professionals do in authentic practice, each candidate had a distinct role in the joint enterprise, signing up for important events to cover. The candidates researched selected people or events, then added a picture or video along with an explanation of the significance. Finally, they synthesized the information from all of the contributions by reviewing the entire timeline and summarizing the history into 3 major periods of development on an asynchronous discussion board. Candidates chose and named their time periods and explained their rationale for dividing the history in that way.

Through this joint enterprise of creating a Praxis study tool, the candidates worked independently and privately but participated in a shared responsibility. They reified their work in the timeline, which became a focal point for further participation as candidates used the tool in discussing larger historical themes. Candidates not only summarized the timeline for themselves, but considered and responded to others’ conceptualizations of the timeline during the discussion, enacting the cyclical process of participation and reification essential to a community of practice.

**Shared Repertoire**

In the field of education, a shared repertoire of resources can be of great value as a source of new ideas, but it can also serve to deepen understanding and the quality of practice. Again aligned with learning outcomes in the deaf education survey course, the shared repertoire project was designed to highlight the importance of role models in building self-esteem among students with disabilities. Each candidate authored an online storybook outlining the life and accomplishments of an outstanding figure who was deaf or hard of hearing and created an accompanying lesson plan. Books were shared through the online resource StoryJumper (https://www.storyjumper.com/), resulting in a repository of resources for future use. After reviewing each other’s work, candidates participated in a discussion board activity. They selected a title for a hypothesi-
Candidates synthesized the qualities described and organized them around a theme related back to the ideas of self-esteem, socialization, and cultural identity presented in their text. Through meaningful interaction with each other, candidates were able to extend, confirm, or modify previous knowledge.

Considerations

Faculty interested in implementing the community of practice when designing course activities must take both theoretical and technical considerations into account. On the theoretical side, it is important to identify opportunities to move beyond activities based solely in the classroom to those based in the community of practice. Instructors should provide students with authentic problems to address in their relevant area of study and design activities that allow students to collectively tackle these authentic problems through joint enterprise, mutual engagement, and/or creating a shared repertoire. Where possible, students should reify their knowledge through the creation of tangible representations of their work and then continue the dual process of participation and reification by utilizing what they’ve created in reflective discussions or collective activities that extend their professional engagement.

Tools make authentic work possible. The plethora of free or low-cost online resources currently available can aid in designing activities for an online community of practice. The activities described in this paper used Tiki Toki, ThingLink, and StoryJumper, but the specific technologies that instructors choose will depend on the course subject matter, the learning objectives, and the practicality of the tools for student use. If specific tools are used in professional practice and it makes sense for students to learn the tools as part of the course, those are probably the tools that should be used. In other cases, if the instructor has a target activity in mind, a simple online search might reveal technologies that can be used for that purpose. Practical considerations include the cost, ease of use, and shareability or reusability of the technology. The technologies described in this paper required little explanation because of their intuitive design, but some technologies might be significantly harder for students to use. The instructor should test out the proposed tool. If he/she struggles to understand it, students likely will as well. In these cases the difficulty of the tool must be weighed against the value of the tool. It will be worth any course time that it takes to teach the tool if it is highly relevant to students’ future professions or if the tool can be used extensively to advance learning. Finally, to make the activity meaningful, students must be able to use their creations beyond the scope of the class. Technologies stuck behind firewalls restrict student access and make the results less valuable for students, while technologies that enable students to share products with others or access outside of the course have the potential for greatest impact.

Conclusion

Not every assignment or project in a class needs to focus on the dimensions of practice as outlined here, but incorporating CoP into course design provides a way to meet the needs of online learners and create meaningful instruction. While designing activities around the idea of the CoP may take time and effort initially, benefits to both students and the instructor are evident. Engagement with classmates not only decreases the likelihood of cheating, it also reduces the feeling of isolation for students in online courses while it facilitates a collective process of negotiation of meaning.

References


Enhancing Training Through Multimodality: An Innovative Student Learning Platform

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To enhance student employees’ learning, the authors created a new training platform, DECK (Developing Excellence in Consultant Knowledge). DECK is an innovative training platform that engages student employees in meaningful online learning by combining several educational practices to promote a flexible, self-driven approach to professional development.

Introduction

Innovative educational practices are often discussed within the context of the classroom, but significant learning happens in outside classrooms across college campuses. Writing centers, like other campus student support systems, have the unique opportunity to educate outside of the confines of the classroom. Moreover, this education is a peer education, students teaching other students. These supplemental resources for students should draw on theories or pedagogies from across the disciplines to construct more meaningful instruction and materials that help to reinforce learning in the classroom. Professional development for these student employees, then, straddles the border of faculty and student development because these consultants, tutors, and/or mentors play a major role in other students’ learning.

To enhance our student employees’ learning, the authors created a new training platform, DECK (Developing Excellence in Consultant Knowledge). DECK is a multimodal professional development platform that provides a scalable, metacognitive approach to writing consultant learning. DECK houses professional development modules and resources for writing center consultants that incorporates multimodal and metacognitive elements to create a more engaging learning experience. Along with DECK, our writing center’s professional development program moved to a tracked approach; consultants are now broken into tracks based on the amount of time they have worked for the writing center. These tracks, with the use of Bloom’s Revised Taxonomy (Coffey, 2008), allow consultants to engage in ongoing, flexible online modules that advance their educational development (rather than attending the same seminars semester after semester). DECK is an innovative training platform that engages student employees in meaningful online learning by combining several educational practices to promote a flexible, self-driven approach to professional development.

Programmatic Context

Eastern Kentucky University, a regional comprehensive university, houses a large writing center: the Noel Studio for Academic Creativity. The Noel Studio is an “integrated support service for writing, communication, and research” for students and faculty at EKU (“About the Noel Studio”). Carpenter, Valley, Napier, and Apostel define a studio space as an “interactive space that encourages effective communication design through creative thinking, integrative collaboration, and visual thinking” (p. 329). With these definitions of space in mind, the authors, the incoming and outgoing Professional Development Coordinators for the Noel Studio, created DECK in the summer 2016 semester. This new digital space gave consultants a place to take control of their own learning by continually building knowledge through scaffolded modules. During its pilot year, DECK served the educational development needs of over 30 academic consultants in the 2016-2017 academic year.
The DECK system is a hybrid, systematic, and scalable training program that promotes collaboration between consultants with a mixture of online, metacognitive activities and discussion-based in-person seminars. Bloom’s Revised Taxonomy acts as one of the foundational educational theories for DECK, allowing for the modules to be scaffolded based on consultant experience. DECK includes resources for consultants, modules, outside reading materials, and consultant pages that can be used for activities and reflection.

Overview of Structural and Theoretical Approach

Structural Background: Building a Space

DECK’s genesis occurred around the same time as Eastern Kentucky University’s faculty development website, DEEP (Developing Excellence in Eastern’s Professors). The two platforms share many similarities, such as foundational educational practices and structural formation. Both platforms use Bloom’s Revised Taxonomy to integrate multiple levels of learning that contain materials and assignments for learners. As learners progress through the levels of learning, their engagement is intensified, as signified by learning outcomes and Bloom’s Revised Taxonomy. Finally, both systems are openly available but only to identified participants (content is available upon logging in to the system). This quasi-open access to these systems is of the great importance; participants can still access the information at any time, but maintain the privacy to discuss their own needs without worry of an outsider reading their opinions. In sum, the systems have the same purpose with a similar approach: to provide deep learning opportunities for EKU academic employees.

Theoretical Background: Providing a Foundation

In an effort to create a scalable learning system for Noel Studio consultants, the four training tracks were developed based on the amount of time each consultant had been employed by the writing center. These tracks were then assigned Bloom’s Revised Taxonomy verbiage from remembering to creating. First semester employees (Learners) focus only on remembering, understanding, and applying the knowledge they gain during trainings. Second semester employees (Practitioners) analyze and apply the content presented in online modules and in-person seminars. Third semester employees (Scholars) work on analyzing, evaluating, and promoting the knowledge received in their training. Finally the Experts, or fourth semester employees and beyond, work on creating new knowledge for their fellow consultants. These tracks are further defined in the chart below, which is provided to all employees and staff at the Noel Studio.

<table>
<thead>
<tr>
<th>Level</th>
<th>Bloom’s Taxonomy</th>
<th>Definition by Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Learner</td>
<td>Understanding and applying knowledge</td>
<td>Review key materials on consulting topic. Begin the process of understanding new ways to apply knowledge gained.</td>
</tr>
<tr>
<td>2. Practitioner</td>
<td>Applying and analyzing knowledge</td>
<td>Continues applying knowledge gained and beings analyzing consulting practices.</td>
</tr>
<tr>
<td>3. Scholar</td>
<td>Analyzing, evaluating, and promoting knowledge</td>
<td>Dedicated to analyzing, evaluating, and promoting Studio knowledge, practice, and pedagogy.</td>
</tr>
<tr>
<td>4. Expert</td>
<td>Creating new knowledge based on the consulting topic</td>
<td>Consultants mentoring other consultants; Creation of new knowledge that builds on knowledge gained from original research, scholarship, or consulting, or committee work; This may also manifest in the creation of resources, training materials, writing initiatives, workshops, or other programming.</td>
</tr>
</tbody>
</table>

Figure 1. Noel Studio student development tracks based on Bloom’s Revised Taxonomy
Along with Bloom’s Revised Taxonomy, metacognition is a major education strategy used within DECK. Metacognition is integrated into the modules through activities that promote reflection and deep thought through application and real-life scenarios. These reflections were an integral part of each DECK module. At the end of each module, consultants were asked to complete a brief reflection of their learning process during the module within their consultant page. Each consultant maintained his or her respective consultant page throughout the entirety of the consultant’s employment. In addition to module reflections, the consultant page housed beginning and end-of-semester reflections which include goals the consultant has set for themselves.

Although Bloom’s Revised Taxonomy and metacognition are clearly the two major theoretical backings for DECK, Noel Studio Pedagogy encompasses all of the work done within the Noel Studio. The Noel Studio Pedagogy focuses on space and is defined as “A model for space design and consultation that considers students' multiliteracy skills and learning styles through integrated practices” (Carpenter, Valley, Napier, & Apostel, p. 329). Although the integration of DECK brings questions of digital versus physical space, Noel Studio Pedagogy is adaptable to many different types of spaces. Noel Studio pedagogy emphasizes “openness and adaptability” to create a politically neutral place that “[invites] cross-disciplinary discussions that prompt divergent and convergent thinking” (Carpenter, Valley, Napier, & Apostel, p. 329). The usage of Noel Studio pedagogy helped to maintain the openness of the physical Noel Studio space into digital space now occupied by DECK.

Analysis: How does it work?

With these goals of purposeful, scaffolded learning and space, DECK was intentionally designed to promote self-efficacy and flexibility with consultant learning. Our design plan began with creating a specific goal for each training module using the Bloom’s Taxonomy verbiage, as well as considering consultants were asking for and needed from their professional development. Next, we found materials for consultants to read and look through to gain new knowledge. These materials could take the form of chapters from books, handouts, pictures, videos, or any other media. These first two steps are the same regardless of module form (fully online or a hybrid on online and in-person). After the consultants go through the reading material, each fully online module contains an activity to be completed in the discussion board where they interact with other consultants. With in-person modules, the activity is done in-person at a Noel Studio seminar. Once the activity has been completed, every module requires consultants to conduct a self-reflection in an effort to have consultants complete a more metacognitive learning process and allow them to think through applying new knowledge to consulting as a whole.

The following figures are example modules, including the goals, resources and materials, activities, and reflections. Each module is unique in topic and tailored to fit the intended consultant track. The reading module is an example the revised DECK modules that will go live to consultants for the 2017-2018 school year: the same goal and materials, with different activities and reflections based on the consultant track.

Our training website is designed to promote self-efficacy in consultant learning and training. By providing the consultants with new knowledge online, they are taking responsibility for their own learning. Additionally, the online content provides more time for consultants to think about and discuss their new knowledge, addressing any questions or concerns they might have during the in-person meetings or online discussion boards. These discussions allow for further prioritizing in consultant training, rather than reviewing knowledge, policies, and tactics that consultants already know.

Discussion and Considerations: Embrace Uncertainty

Upon reflecting on DECK’s development, we have created a four-step process that can be adapted to classrooms, faculty training, or really any venue in which a communication text is being made. First, begin by choosing a foundational theory and/or pedagogy that aligns with the specific purpose. For DECK, the Noel Studio’s initial pedagogy concerning digital space began as a framework, and Bloom’s Revised Taxonomy and metacognition were added for support. The second step is to consider the rhetorical situation of the product; consider the context/purpose, audience, author(s), and the message that
needs to be relayed. For example, Noel Studio consultants are usually some of the most involved people on campus; therefore, we wanted to ensure that all training contained new knowledge that was highly applicable, that the modules were worth the time consultants would be spending on it. Third, utilize low-tech prototypes to conduct the planning stages of your work. There was a considerable amount of time spent drawing on whiteboards, butcher paper, and using other low-tech manipulatives to plan what the training website and modules would look like on DECK. Once we determined our foundational theories, established our rhetorical situation, and planned with low-tech prototypes, we finally began creating content on the digital space. When creating digital content we simply had had to embrace our

Figure 2. The metacognitive consulting strategies module for Practitioners.

Figure 3. The consultant philosophy module for Scholars.
uncertainty, the fourth step of the process, because we were creating something completely new while using technology and programs that were unfamiliar. These four steps can be adapted and generalized to fit multiple contexts such as the classroom, faculty development, online courses, etc. Figure 5 is a graphic that summates this four-step process.

DECK was designed to be extremely adaptable and fluid due to the nature of consulting. However, our system is not limited to its use in writing centers and scholars from other areas can benefit from DECK’s development and development process. Academic faculty and staff, both at Eastern Kentucky University and elsewhere, can adapt this training system for their classrooms. Although homework assignments or online classes may be structurally modeled after DECK modules, there are a few elements within each module that could be especially helpful to students and educators alike: the goal and reflection.

Individual modular goals and reflections are not always an inherent learning process but they

Figure 4. The reading module in which each track will complete their designated activity.

Figure 5. The Noel Studio’s Four-Step Process.
carry great importance and are highly beneficial to learners. By providing a clear and understandable goal for each module or assignment, students can better understand what concepts should be gained from each assignment. Additionally, these goals help students understand the purpose of the individual assignments and how the assignment fits into the overall structure or purpose for the course. Likewise, the reflection is key aspect to understanding how new knowledge acquired throughout the course relates back to previous knowledge and experiences. During the reflection process, students may find that they need to further revise their assignments and/or have questions about the content being presented. Professors may complete reflections as a part of individual modules or ask students to keep an ongoing reflection in journals, like DECK’s consultant pages, with reflections at the beginning and end of the semester or requiring reflections as a part of larger projects to promote metacognitive practices.

Goal setting and reflecting, along with other metacognitive strategies, promote self-driven learning. Self-efficacy and allowing students to take responsibility for their own learning is a key element to any higher education. While many professors integrate some practices that promote independent learning (out of class reading assignments, group work, etc.), digital development systems allow for better tracking of the student progress through the reflections, activities, and discussion. Incorporating metacognitive strategies and Bloom’s Revised Taxonomy is one approach to scale-based learning that pushes students to continue engaging in the learning process instead of becoming stagnant. DECK’s approach to innovative learning is continually being revised as we continue embracing uncertainty and learning along with our consultants.

References
Gender Inclusivity and Professional Language Use in the Classroom

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Effective teaching is student-centered, respects diversity, and ensures equity in the classroom. Conveying these principles as well as professionalism requires educators to model these same practices. Students are increasingly identifying as non-binary genders (Harris Poll, 2017), and acknowledging this change inside the classroom is vital to optimal student success. Language is dynamic. Gender is dynamic. As a result, many educators are unaware of the linguistic changes and social constructions related to gender identity, but practicing inclusivity in the classroom should be a priority for fostering an effective and efficient teaching and learning relationship. Such innovation in language use and pedagogical practice will allow educators to create a better connection with their students and improve the overall classroom environment. The authors discuss the challenges that exclusive language causes in classrooms and offer recommendations to improve teaching and learning through more inclusive language.

Introduction

Current trends in teaching and learning are largely focused on innovations in practices (Sweet, Blythe, & Carpenter, 2016). Much of the basis for this focus on innovation is the effort to create more student-centered classrooms. Student-centered classroom environments require inclusive teaching and learning practices that foster cultural competency not only in the areas of ethnicity, race, and religion but also in gender identity and sexuality.

An Introduction to Gender Inclusivity

As a social construction, gender is “imposed on, rather than developed from, individuals,” as Lorber explained (2014, p. 9). This socialized practice separates people “into two complementary but unequal sets of people—‘women’ and men” and “confers a legal, social, and personal status that overrides individual differences” (Lorber, 2014, p. 9). When an individual does not “fit” into one of the two sets, that person has historically been treated as deviant by a social order that depends on either/or categories—e.g., on/off, black/white, haves/have nots, straight/gay. The notion of an “opposite sex” is also binary. With growing research as well as legal practices and media coverage pertaining to the area between and outside the binaries, gender is becoming more malleable and less prescriptive, despite resistance from demographic groups that seek to maintain the status quo of identity into one of two categories. Non-binary gender identity includes but is not limited to agender, bigender, demi, genderfluid, genderqueer, intersex, neutrois, pangender, third gender, polygender, trans, and other terms that are “constantly invented and evolving” (Krieger 2017; pp. 32-33). Non-binary individuals are not rare entities that need to be “catered to” with special exceptions. Joel et al. (2014) found that those individuals who identify within the gender binary in fact transcend the gender binary as well. The researchers have asserted that “a large proportion of ‘normative’ subjects experience themselves in ways that transcend the either/or logic of the gender binary system. These experiences are similar to those reported by trans and queer subjects as found in the present study and in previous studies” (p. 310). This finding suggests that backlash against more inclusive behavior is based in the belief that the binary is still more prominent than those who do not identify in the binary.

Ansara (2015) examined the Sexual Discrimination Act (SDA) in Australia and its protection of older lesbian, gay, bisexual, transgender, and intersex (LGBTI) individuals as well as those individuals
who identify as non-binary genders specifically. The SDA specifically protects individuals from both direct and indirect discrimination that supports the binary tradition and discourages deviation. Ansara also identified several cultures where the “binary tradition” is not actually tradition, including various Middle Eastern cultures, lending credence to the matter that gender is a social construct and that these individuals deserve the same respect as those who conform to the binary. Ansara continued that while these discriminatory actions occur against those who identify as non-binary, sometimes the offense is not intentional. This unintentional discrimination is what leads to the problems with the language used in institutions that implicitly reinforce social constructions of identity.

The Problem

Exclusionary language in the classroom means that non-binary students often will not feel respected. Kusalik (2010), who does not identify in the traditional gender binary system, has commented that ey [the author’s pronoun] “always feel uncomfortable in identity-based spaces” (p. 55), and instead Kusalik has emphasized experience over identity in most contexts. As Kortendiek (2012) asserted, because “speech can reproduce gender and gender hierarchies,” not considering language that is free of gender bias serves only to uphold stereotypes and to inhibit teaching and learning (p. 221). Such polarization of non-mainstream identities affects the educational relationship between faculty and student, effectively creating a barrier that prevents the gender-nonconforming students from the highest level of learning possible. This barrier often manifests in a disconnect between teaching and learning, leading to an ineffective and inefficient classroom. Using exclusionary language alienates students who do not identify within the traditional gender binary, resulting in students not being fully involved in the classroom environment, thus harming the teaching-learning relationship that is crucial in effective classrooms. With incoming students as digital natives who are savvy with self-expression through social media, many come to the university having explored their (and others’) gender identity online, which, Melonashi (2017) argued, “greatly facilitates expression of self in real contexts” (p. 70). Thus, with the growing awareness of variant gender identity among teens and young adults, the students who identify along traditional gender lines will most likely notice the bias, and in their compassion toward non-binary peers, they, too, will feel disrespected. More than ever, students in higher education recognize outdated language regarding identity and will be more likely to view the classroom as an uninformative, less sophisticated space if gender-biased language is common (Grünberg, 2012).

The Teaching and Learning Connection

Finding effective and efficient possible considerations to unbiased language in the classroom is crucial to overall student success during and after the college experience. Grünberg (2012) posited that “only through a democratic, inclusive curriculum, one that responds to the needs and values of societies, one that includes more than excludes, may we be confident that we produce open-minded individuals, able to cope with the diversities around them, to accept, and celebrate differences” (p. 8). Campuses must remedy the problem of exclusionary language in classrooms if there is ever a hope to produce global citizens.

Such a goal cannot be achieved overnight; rather, instructors can make subtle changes in their language to improve the inclusivity of a classroom and thus positively affect the teaching and learning relationship in the classroom. These adaptations include, but are not limited to, the following:

1. **Accepting “they” as a singular pronoun.** Using “they” as a singular pronoun might be an academic’s worst nightmare, as linguistics instruction has traditionally identified “they” as a plural pronoun; however, as languages have frequently evolved over the centuries, many professional language organizations as well as media groups now consider “they” a singular pronoun (Pauwels & Winter, 2006). Similar to the obsolescence of “he” as a generic pronoun, “they” has naturally shifted to represent singular individuals as well as plural groups; as a result, educators can avoid gendering the non-binary students and can thus lend a sense of linguistic awareness as well as respect to the classroom environment.
2. Eliminating gendered titles and honorifics. Discontinuing the use of gendered titles and honorifics may also seem daunting upon first glance as respect is often exemplified as saying, “Yes, ma’am,” “No, ma’am,” “Yes, sir,” and “No, sir,” or by addressing others as “Miss/Ms.” or “Mr.” However, this gender-specific language alienates those who consider themselves neither feminine nor masculine, or both identities. By simply changing these titles to a respectful tone of voice, dropping the old-fashioned “ma’am/sir” address, or by using their full or first name, the speaker may eliminate the sense of alienation conveyed to the listener. UK Trans Info (Lodge, 2013) found that 1,291 people prefer not to be addressed by a title or honorific, regardless of their gender identity. Taking these numbers into account, Lodge (2013) argued that this trend change needs to follow the data and language needs to adapt as necessary.

3. Accepting alternate pronouns and names upon the students’ request. Many non-binary students use “they” as their pronouns, but because there are students who prefer to use a different group of pronouns altogether, these students should receive respect for their identity. Some countries, such as the UK, widely accept the use of such gender-neutral pronouns as “e,” “ey,” “hu,” “per,” “ve,” “xe,” “ze,” and “zhe.” Instead of making assumptions about a student’s gender identity, the instructor may request all students’ pronouns at the beginning of the semester and then use those pronouns when interacting with the students; as a result, these individuals will feel recognized and respected, enabling the teaching and learning relationship to thrive. Similarly, some students in transition change their names but have not yet gone through the legal process to do so, in which case the students’ “deadnames” appear on the roster; asking students in advance if they use a different name from the university’s records is a matter of courtesy. As Bornstein (1995) indicated, these small changes would help eliminate the alienation that non-binary students often feel in the classroom. Such a request communicates to all students that diversity and equity are classroom values, creating an optimal learning environment for everyone.

Significance

These recommendations for language changes may seem small, but they can be significant and meaningful to the quality of a classroom environment. Implementing these changes will ensure an inclusive learning environment for all students and result in an improved quality of learning. The teaching and learning relationship would benefit substantially as subtle changes can accomplish noticeable results. Changes in instructors’ behavior regarding student experiences are key to making inclusivity a widespread focus on campus. If educators know that these measures can improve the learning of their students, many will incorporate them effectively (Benson et al., 2013; Johnson, 2003). The goal is to create a welcoming space in the classroom that promotes the most effective teaching and learning.

Ultimately, the focus of these changes should be on improving the experiences of the entire class, which will effect changes in the students’ attitudes toward those who are different from them, not only during their college experience, but also in their interactions with others after they have graduated. Classrooms should not create gendered spaces and divisions but rather a non-gendered, experience-based space where learning is the focus (Kusalik, 2010). Creating such a welcoming environment consists of accepting alternate pronouns while not singling out those who use non-traditional pronouns, accepting “they” as a singular pronoun for all students, and not using gendered titles when addressing students. Any individual changes a professor can make to ensure that all students feel welcome will make a classroom the most inclusive it can be and will aid students in becoming culturally competent learners who practice inclusiveness in their daily lives.

References


Appendix

Definitions

Non-Binary Gender—any gender that is not male or female, which is the binary tradition in most countries and cultures. Example: gender neutral, gender fluid, gender queer, among others.

Gender Exclusive—acknowledging and using only the binary gender traditions of male and female. Example: “Please check Male or Female.” “Yes, ma’am/sir,” or “No, ma’am/sir.”

Gender Inclusive—being mindful and respectful of the existence of all genders. Example: “Please provide your gender and pronouns.” “Yes/no [insert individual’s name].”


Harris Poll (2017). Accelerating Acceptance. GLAAD.


Using Film to Teach Diversity in Higher Education: Stimulating the Affective Processes of Learning

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This article commences with a discussion of contemporary goals of diversity education and an examination of Krathwohl’s taxonomy of the affective domain. The authors present the benefits of experiential learning, specifically illuminating the use of film as a pedagogical device to promote diversity education in the classroom. Lastly, the authors detail a sample learning activity using the film Moonlight.

Introduction

Diversity is an important training component that has long been revered and promoted in institutions of higher learning. Ever-changing global and cultural demographics necessitate that informed citizens possess more than a superficial understanding of cultural differences. Cultural empathy and personal self-awareness are foundational to diversity education, and scholars recommend that educators employ pedagogical methods that engage both cognitive and affective processes of learning when teaching diversity-related issues. Considering the overwhelming divergence of cultural and personal identities that represent the global collective of humans, educators are called upon to prioritize diversity goals in curriculum design. In fact, many academic accreditation organizations have incorporated diversity-related objectives in accreditation standards.

Goals of Diversity Education

The goals of diversity education are vast and multifaceted. Although not entirely encompassing, literature provides some insight into the most commonly accepted goals among higher education professionals. Perhaps one of the most noted goals of diversity education is to increase students’ knowledge base and affirm the value of content that has been undervalued by the dominant culture (Chang, 2005; Talbot, 2003). Academia’s commitment to this goal has been demonstrated by ever-growing expansion of academic departments devoted to study of specific cultural groups, their history, and ongoing influence and contributions to contemporary society. An additional goal of diversity education is to advance students’ understanding and attitudes to matters of difference, including issues of racism and sexism, privilege, and oppression (Chang, 2005; Denson, 2009; Harper & Hurtado, 2007). Diversity education also strives to facilitate students’ cognitive development, including critical thinking and problem-solving abilities (Bowman, 2010). Fostering students’ personal development, including emotional, self-identity, and affective growth is a priority goal of diversity education as well (Denson, 2009; Ford, 2012). A hallmark of diversity education is the promotion of conceptualizing the impact of societal oppression and injustice (Gause, 2011; Swain, 2013). Ultimately these objectives contribute to the overall goal of preparing students for productive and successful citizenship in a diverse world which arguably may be the most prominent desired outcome among educational institutions (Swain, 2013).

Defining Diversity

Reduced to its most basic premise, diversity is defined as “the condition of having or being composed of differing elements, especially the inclusion of different types of people (such as people of different races or cultures) in a group or organization” (Merriam Webster Online, n.d.). Although this definition provides a foundational point from which
to reference, it does not articulate the complicated context in which differences exist. In an effort to promote students’ critical thinking abilities, the authors suggest that educators facilitate rich dialogue focused on the complexity of individual differences and identities.

Loden’s (1996) model, commonly referred to as the “Diversity Wheel,” expands on the dimensions of differences and may prove as a beneficial point of reference for students engaged in cultural education. The model differentiates the primary and secondary dimensions of differences. The primary or core dimension represents the most powerful and sustaining differences that usually have an important impact throughout our lives and have the capacity to help shape our self-image and worldviews (Loden, 1996). Differences such as age, class, ethnicity, gender, income, physical abilities and characteristics, race, sexuality, and spiritual beliefs comprise the primary dimension of the model (Loden, 1996). The secondary dimension represents other important differences that are acquired later in life and presumably have less influence in defining who we are (Loden, 1996). Differences that fall within the secondary dimension include: communication style, cognitive style, education, family status, first language, geographic location, military experience, political beliefs, and work experience and style (Loden, 1996). Introducing these dimensions early in the classroom experience permits students to examine and evaluate their own differences and the differences of others in a purely cognitive, non-threatening manner. This strategy also lays the foundation for more critical topics of conversation to emerge as the course progresses.

Further contextualizing individual differences, their meanings, power, and impact on the lived experiences of cultural individuals contributes to the greater understanding of the complexity that is diversity. Classroom discussions regarding intersectionality provide practical segues for more in-depth, critical examinations of diversity. Intersectionality is a term coined by American civil rights activist and scholar of critical race theory Kimberlé Williams Crenshaw (1989). Intersectionality has been defined in a variety of ways by scholars over the years, yet some generally accepted tenets transcend disciplinary boundaries and characterize the framework. Intersectionality promotes an understanding of human beings as being shaped by the interaction of different social locations (Hankivsky, 2014). An additional provision is that interactions occur within a context of connected systems and structures of power by which interdependent forms of privilege and oppression shaped by colonialism, imperialism, racism, homophobia, ableism, and patriarchy are created (Hankivsky, 2014). The theory further espouses that people’s lives are multidimensional, complex, and cannot be explained by single identity categories. Relationships and power dynamics between social locations and processes are thought to be linked and people can experience privilege and oppression simultaneously (Hankivsky, 2014). Intersectionality is oriented towards transformations, building coalitions among different groups, and working towards social justice (Hankivsky, 2014). Intersectional theory not only aligns with many of the stated goals of diversity education but also examines the cultural and systematic foundations that impact the social experiences of our differences. Although intersectionality is not a simple theory to dissect and explore, it is a necessary educational component of diversity education that warrants educators’ attention and effort.

Affective Domain of Learning

The affective domain represents one of the three separate domains of human development and is detailed in Krathwohl, Bloom, and Masia’s seminal work (1964). Although learners in diversity education courses inevitably gain new cognitive information, many experience emotive reactions to diversity-related content. The affective taxonomy, similarly to the cognitive taxonomy, conceptualizes five educational objective levels on a continuum of internalization, which is the organizational principle used to categorize learners’ interest, appreciation, attitudes, and values regarding newly processed information (Krathwohl et al., 1964). The initial educational objective is receiving and is characterized by the learner having a willingness to pay attention to new information (Krathwohl et al., 1964). The second objective in the hierarchy is responding and in this stage the learner reacts voluntarily or complies with directives to react to information that has been received (Krathwohl et al., 1964). The third objective, valuing, is characterized by acceptance of, preference for, and commitment to the processed
information (Krathwohl et al., 1964). The fourth objective, organization, is characterized by the rearrangement of the learner’s existing value system to permit internalization of new value regarding learned information (Krathwohl et al., 1964). The final objective, characterization, is the stage that newly valued, accepted, and preferred information is incorporated into the learner’s generalized set of values from which life is encountered and processed (Krathwohl et al., 1964).

**Experiential Pedagogy**

Experiential learning theory is founded in the work of Kolb (1984) and is characterized by specific essential elements, including abstract ideas, concrete experiences, reflective processes, and active participation (Pugh, 2014). Experiential methods have proven successful in increasing learners’ cultural self-awareness and exploring how their own attitudes, values, and biases have been shaped by their experienced culture (Fawcett & Evans, 2012; Greene et al., 2014). Experiential education has been demonstrated as particularly effective for culturally encapsulated learners who may have limited exposure to people of different cultural backgrounds (Pieterse, 2009; Shen, 2015).

Within the experiential classroom, educators introduce learners to or assist them with acquiring an abstract idea (Pugh, 2014). An individual learner’s own dimensions of diversity and socialized experiences may influence or hinder their ability to identify with thoughts, ideals, and experiences outside of their purview. In diversity education courses, exposure to abstraction may be prevalent. Once the learner is introduced to or acquires an abstract idea, the educator then must ensure that the learner has an opportunity to learn about that idea via a meaningful, concrete experience (Pugh, 2014). Experiential activities should demonstrate some concept of the abstract idea and should engage the learner by being valuable and relevant to their own lives and social reality (Pugh, 2014). Examples can include field experiences, in-class exercises, speaker panels, films, books, storytelling, and small-group processes (Pugh, 2014).

During and following the concrete experience, the learner should be provided an opportunity for reflection (Pugh, 2014). Critical thinking is essential to self-reflection and should be actively promoted by the educator (Pugh, 2014). Educators must also strive to ensure an atmosphere of safety in the classroom so that learners may openly and honestly express their thoughts, feelings, and attitudes regarding the concrete experience (Pugh, 2014). One effective means of reflection may be assigning a reflection writing assignment where learners respond to guiding questions aimed at detailing their unfiltered thoughts, feelings, attitudes, values, and opinions of the concrete experience and abstract idea (Pugh, 2014). Lastly, it is recommended that learners engage in active experimentation (Kolb, 1984). This experimentation provides learners an opportunity to test the newly acquired idea and experience, as well as engaging with others in group processing (Pugh, 2014). Much like the reflection phase, group processing requires use of critical thinking and a level of safety (Pugh, 2014). Further learning may be promoted as learners discover differences and commonalities of experience and understanding (Pugh, 2014).

**Benefits of Film-Based Activities**

A film-based in-class activity or assignment is one way to provide concrete experiential exposure to situations that portray the intersectionality of diverse identities which, as noted above, are unique entry points for student exploration of personal thoughts, feelings, values, and identities. The use of films that portray diversity-based narratives in a meaningful manner allow educators to expose students to varied cultures and issues that they might not otherwise encounter. This exposure may be especially prevalent for students living in rural, monocultural areas. The use of film-based activities provides many additional benefits. For example, viewing a film and engaging in reflective processing provides a safe entry into difficult conversations as students may use the characters’ situation as a point of departure for discussing challenging topics that might not otherwise be addressed. As students move through their own identity development and strive to understand the frame through which each views the world, film-based activities provide as close to a real-life interaction as may be possible. These activities can prove beneficial in helping students confront biases as yet unacknowledged or explore personal identities that may shape the way they interact with others. As Sommer, Kholomeydik, Rush,
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and Elliot (in review) noted, “Students as direct observers [may experience] the events portrayed in films as if they were happening in the present moment…. Such immediate experience [provides] a unique opportunity to understand or interpret the experiences of others through an insider’s lens.” It is this opportunity to allow viewers to encounter the film characters’ world that makes this type of activity a rich source of reflection and dialogue.

Challenges of Film-Based Activities

Although film-based activities and assignments can yield opportunities to enhance personal understanding via reflection, these activities can also come with challenges for educators. Most of the potential problems may be avoided with good planning and preparation. Effective preparation will take some time in terms of both faculty planning and student participation, but it is time well spent. Educators should have a clear reason for the activity and this should be carefully articulated in the course syllabus. As with most activities, when facilitators and participants clearly understand the activity and how it is to be completed then all parties can focus on the content of the activity and be confused by the logistics of it when it is in use. Educators must remember that based on the students’ awareness of and comfort with their personal identity development, the content in films that address issues related to race, gender, sexual orientation, religion, and socioeconomic status can “evoke negative reactions and defensiveness” (Sommer, Kholomeydik, Rush, & Elliott, in review). Therefore, individual students may struggle at different levels with the content and discussion in activities like these. Some may need additional time with faculty outside of the classroom. We strongly believe that the benefits of film-based activities outweigh the potential challenges and, as noted above, careful preparation prior to watching and discussing the film can ameliorate any unwanted outcomes. It is worth revising course outlines to allow opportunities for reflection based on experiential engagement.

Guidelines for Using Film-Based Activities

Activities that are well planned and clearly explained lead to the best results. The initial decision often involves film selection. A list of films that deal with identity and intersectionality such as the one in Sommer, Kholomeydik, Rush, and Elliott (in review) can provide a helpful starting point. In general, educators should look for films that offer realistic portrayals of characters that are involved in settings and situations where race, ethnicity, gender, sexual orientation, religion and spirituality, and/or socio-economic status are central themes. We could urge faculty to select films that are non-controversial, but it is these films that often provide the best opportunities for reflection and growth. Choose wisely and be prepared for potentially difficult but enriching conversations. One way to ensure student interest and involvement is to allow students to be part of the film selection process as this can lead to buy-in for the project (Sommer, Kholomeydik, Rush, & Elliott, in review). Early in the semester, the professor could present a list of potential films for review and ask students which one(s) they would like to view. Students may offer suggestions of films with which the professor is not familiar. These should not automatically be ruled out; however, it is paramount that the educator review the film before agreeing to its use in the class.

In addition to time spent in the selection of the film, careful attention should also be given to providing the class with a clear understanding of the purpose of the assignment and the way in which students will participate in any written or oral reflections. Clear guidelines for the assignment should be provided in the syllabus as well as explained orally. Time should be given for students to process and ask questions about the assignment. Although it may seem that these precautions take valuable time from the classroom in a course curriculum that is already full, this careful investment prior to engagement in the actual activity is an important part of the process. This dialogue about the assignment prior to the assignment accomplishes two requisite objectives. First, students understand that their views and opinions are important and this initial conversation can help set a real, but respectful, tone for future conversations. Second, when students clearly understand the assignment and why it is important, initial fears and confusion about sharing potentially personal views can be mitigated. Finally, it is imperative that students know, and believe, that all values, beliefs, and perspectives are welcome and
all will be included in discussions. The only point that is non-negotiable is that all students treat one another with respect.

**Experiential *Moonlight* Exercise**

*Moonlight* is a 2016 coming-of-age drama film written and directed by Barry Jenkins, based on Tarell Alvin McCraney’s unpublished semi-autobiographical play *In Moonlight Black Boys Look Blue*. The majority of the film takes place in Liberty City, Miami and highlights Chiron’s struggle with identity from childhood to adulthood. Specifically, the film illuminates Chiron’s experiences as a gay, black male living in poverty with his drug-addicted mother. The film consists of three chapters each titled after the protagonist’s nickname or identity (“Little,” “Chiron,” and “Black”) during his childhood, adolescence, and adulthood, respectively. Themes include discrimination, bullying, internalized stigma, self-acceptance, hypermasculinity, abuse, forgiveness, and resiliency. The film has received accolades from critics and audiences. In 2017, the film was awarded a Golden Globe for Best Motion Picture-Drama and Academy Awards for Best Picture, Best Supporting Actor, and Best Adapted Screenplay.

The course instructor should view the film beforehand and decide how students will view the film. Although students may view the film individually, watching it as a class or in small groups can provide more opportunities for discussion and reflection. Once the students have viewed the film, the use of purposeful, open-ended process questions that are designed to stimulate reflection and critical thinking can be discussed as a class, or in small groups, or as a last resort, in personal journals. Sample process questions include:

1. What were you feeling as you finished watching this scene? Why?
2. How would you characterize what Little was experiencing during the scene? Why may he be feeling that way?
3. How was Juan affected by his conversation with Little?
4. What are some of Little’s diverse identities? How do they intersect? How may these intersections make Little feel?
5. What are the social, economic, and cultural conditions that may impact Little’s identity development? Are these conditions beneficial or detrimental?

**Additional Thoughts**

The inclusion of film-based activities can provide meaningful exposure to diversity in classes where the facilitation of multicultural sensitivity and competence are course objectives. As noted earlier, experiential activities are the most meaningful ways to stimulate the reflection and critical thinking needed in order to understand and integrate diversity-related course content. The time invested in the design and execution of such activities is time well spent. Educators are advised to consider how and when to incorporate film-based activities using films such as *Moonlight* to broaden student worldviews. We encourage educators to be mindful as they view films in the normal course of life to consider films for their usefulness in the classroom. The development of a personal list of diversity-related films could be an important resource.

**References**


Using Script Writing to Transform Students’ Attitudes about the Literature Review Research Process

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Within the university, students have different perceptions on integrating research into their writing. Scholars have shown students’ common attitudes toward the research process to be negative. Using creative strategies, instructors can transform students’ mindsets to be more positive. This article outlines how scriptwriting was used to teach writing the literature review in an upper-level research methods class. Students formed a dialogue among their scholars in relation to themes in their literature review. This activity challenged the students in their perspective of their research, enlivened the subject matter, and engaged students in scholarly conversation. Implications for this activity extend into other genres and writing contexts.

“I hate research.”
“This project was challenging and insightful, research that made me think.”
“I find research useful for my future career.”
“I will never have to research in my career. Why do I have to do it?”

These mixed attitudes abound within the research methods classroom, but, based on my experiences teaching research, not many students enter the classroom commenting on research’s usefulness and insightfulness. Out of Nelson’s (1994) study of 238 freshman composition students, only 5% viewed research as recursive—a “rhetoric of doing.” Students who commit to a rhetoric of doing position research as a process that requires deep cognition, one of exploration, analysis, and a clear organization of researched information to an audience. Scholars have remarked that most students understand the significance of research to their field of study (AlGhamdi, Moussa, AEssa, AlOthimeen, & Al-Saud, 2014) and view research positively (Nel, Burman, Hoffman, & Randera-Rees, 2014). Much of the scholarship on these research attitudes has been conducted in the medical field due to the research emphasis in that field. For example, Imafuku, Saiki, Kawakami, and Suzuki (2015) studied 14 medical students to understand these different perceptions and research processes. According to their findings, the act of researching benefited these students’ learning and their metacognition. The authors stated: “some students were regularly reflecting on the progress of their research project and their own contributions to collective learning” (p. 54). Their study showed how students matured in their learning process because of research. Burgess, O’Flynn, and Boylan (2010) studied 317 medical students via a questionnaire on research skills and gathered qualitative perspectives from 235 of these participants. From this research, they found positive themes about students viewing research as important to practice (12% of the participants) and to advancement in career (10%). Overall, many students consider research to be a positive experience.

However, more students tend to view research as negative. To these students, research has become “rhetoric of the finished word” (Nelson, 1994). Within this framework, students depict research as merely restating others’ thoughts. Some scholars have shown that students regard research negatively at the university (Papanastasiou, 2005). Burgoyne et al. (2010) added to these perceptions. In their study of 317 students, 9% viewed research as dissociated from the care of patients and 11% as uncertain about what field research involved. Ultimately, how students perceive research relates to factors of students’ experiences and worldview, especially the utility of the subject (according to
Papanastasiou (2005)) and the classroom environment. If students do not know the value of research to their lives or their future careers, they will have a negative attitude toward this process. These values are taught in the classroom.

Even though students’ prior learning experiences with research have impacted this mindset, that fact does not mean students’ attitudes are unchangeable. In fact, given the neuroplasticity of the brain, how instructors teach research impacts how students learn and can alter their mindset. In research methods classes, where the level of research is elevated, instructors need to create a classroom that overturns the static, negative, and useless depiction students may have of research. For these courses, wherein students compose literature reviews by using multiple scholars’ studies and theories on one topic, one way instructors can change students’ mindsets to positivity about the research completed in literature reviews is to employ a creative strategy. This article will discuss how scriptwriting benefited students in my Research Methods course. Scriptwriting can be implemented in any research-intensive discipline to enliven the subject matter and engage students in scholarly conversation.

Overview of Script Writing Strategy

Scriptwriting or screenwriting takes on a non-conventional definition in the academic setting. Commonly, screenwriting centers on the production of a script, revolving around a set of characters who are involved in a story. Gabriel García Márquez transformed this definition from an organic storyline to a discovery-based one, showing how “every story dictates its own rules and fashions its own poetics” (Arellano, 2016). With this definition, García Márquez presented scriptwriting as exploratory, which aligns well with academia. A script with academic research, rather than focusing on a plot, explores what scholars say about a theme, with the researched scholars as the “characters” carrying a conversation about that theme. For academic purposes, the script activity I designed does not include the special effects, camera angles, or description of delivery that a film script contains; instead, this simplified script works at highlighting the concords and tensions in the dialogue.

In this creative medium, scriptwriting positions research differently, allowing for a more engaged writer. Traditionally, the literature review (writing which comprehensively reviews research on a topic) keeps student writers at a distance from their research. Adding screenwriting to the process refocuses the students’ attention to the perspectives of the scholars. Callele (2004) discussed how this approach encourages student learning: “Encouraging the writer to take on the persona of their characters, to dramatize as they explore character motivations, and to critically analyze the plot from a different characters’ point of view, [sic] often creates new paths to learning” (p. 9). A film script encourages writers to understand each character in more depth. Similarly, within the academic context, screenwriting closes the distance between students and their research, encouraging them to drill deeply into the mind of each scholar and consider how scholars might respond to one another. This activity forces students to consider these scholars to be living personas and calls attention to how students interact with their research. By changing the structure of the story’s telling from a research essay to a script, the literature review becomes a live dialogue. This art form brings a playful dynamic to an academically-infused genre.

Program Context

For literature reviews, scriptwriting brings about a paradigm shift due to its unique perspective building, benefitting research methods classes. The literature review is a common genre in the American Psychological Association (APA) style, and the discourse of the social and behavioral sciences follows this style. At my university, students in this division must write a literature review within their capstone course, Research Methods in the Social and Behavioral Sciences. This course, completed as a junior or a senior, involves designing a research study that answers a question pertinent to their field. Students then write a research proposal that offers a general picture of the study, a literature review of their topic, and the steps undertaken in selecting participants, collecting data, and analyzing data, if time permitted them to conduct this study. The goal of this class is to learn about research techniques and their purposes, and to use research to fill a gap of knowledge. Within this course, the literature review emphasizes the conversations of other scholars on a topic.
While the literature review funneled into and helped support their research proposal, many of the students enjoyed this part of the project least. Prior to each section of the proposal, students did a prewriting exercise, where they answered questions about their goals for this section and their writing and research processes. Their answers revealed their attitudes: “Research is not relevant to my career” and “Research is boring.” Due to these negative perceptions, students struggled with writing the literature review. Similar to what Burgoyne et al. (2010) found, Jamieson (2013) discovered that students see their sources as distinct from one another and struggle with synthesizing connections. In Jamieson’s (2013) study, 800 pages of randomly selected pages from 174 essays by first-year students were analyzed on their use of citations. The authors concluded that students lacked a high level of engagement with their sources, citing 56.5% of the sources just once (Jamieson, 2013). Citing sources only once shows a lack of engagement with the material and in the case of the literature review, a lack of cohesion. Within the social and behavioral sciences, students also consider research to be distant from the humanistic side of their field. To increase the relevance of the literature review and to help students understand the process of using research, I turned to storytelling since the literature review is much like a story—a dialogue with many voices. I experimented with scriptwriting as a primary tool to help students tell their literature review stories.

Analysis of Strategies

Within the literature review, students must look at all dimensions of a topic, parsing them into reoccurring themes in the literature. Writing scripts takes the major players that reiterate these themes and places them in conversation with one another. Viewing the research as a discussion provides the linkage usually missing in student literature reviews. While this activity is not new in and of itself, when placed in an academic context, scriptwriting encourages a fresh outlook on the topic.

The script activity involves a multilayered process that occurs after students have acquired most of the research for their literature review. In the example script, my model for the Research Methods course, the steps progress to deepen the level of engagement with the research (see Appendix A for script activity). To start the script, students select a reoccurring theme seen in their literature and think of a sentence or question that initiates the conversation on that theme. This line and others from the students’ voice are labeled “me” in the script. Other lines are marked according to who said what. After students write the script, I encourage students to develop it one step further (Step 6). This step of the process involves them determining the authority of the source’s author(s) on the subject. Understanding the author’s authority helps to place him or her in the context of the literature.

Within the example script, the dialogue transpires among four players. Though the literature review topics varied in Research Methods, this capstone course paid tribute to the question: “How can your research study change the world?” Students’ research often included a social justice emphasis on how to better understand psychological disorders and/or how to improve the criminal justice system. The theme in the example script focuses on how poetry transforms mindsets about real-world issues. Helping students form the script involves giving them guidance on how to puzzle out the conversation’s main message. Mthethwa-Sommers (2014) appeared to be a significant player in the social justice discussion because she generalized social education theories. Due to her being foundational to this topic, she is included in the conversation after “me.” Stovall (2006) and Camangian (2008), on the other hand, remained secondary and more argumentative in their approach. The “me” portions provide connections among the sources, interpreting what is said about the significance of spoken word poetry. In the model script, the following line shows this negotiation: “Youth of this day face racism, sexism, poverty, low body image, and bullying—which require foresight to negotiate. Poetry repositions these issues by emphasizing the emotional consequences and hard facts of these issues through narrative and metaphor.” This line expands on Camangian’s oppression comment, emphasizing different struggles of youth. The next “me” line then transitions into how poetry is useful in this context, which enables Camangian and Stovall to then comment on what a critical voice means. Likewise, students use the “me” lines to create cohesion within the conversation.

This exercise engages students to think more
creatively about an academic subject matter. Scriptwriting uses a creative mindset to shape what Burke (1941) calls a “parlor”; in this parlor, different parties converse, argue, and wrestle with the meaning of the conversation. Innovation lies not in the tool itself, but in how the tool is implemented in new ways. Students in the Research Methods course found this activity challenging because they had to imagine how authors would respond to each other. By writing a script, they understood the process of synthesizing material and forming a diversified palette of voices within each literature review theme.

Discussion and Considerations

Scriptwriting translates to other genres and writing environments. A script for the literature review primarily informs the audience through investigation of themes, but this activity can also be modified for argumentative essays. Rather than create a script centered on themes, students use the argumentative script to create a conversation that focuses on one reason that their argument is valid, using research that supports and disproves the argument. This activity can be modified to fit different contexts. A psychology class, for instance, could use the scriptwriting approach to personify the two sides of the nature-nurture debate, while a chemistry class could use this activity to understand the multiple perspectives on creationism and evolution. Any research-intensive topic fits with the scriptwriting activity and enables students to deepen their understanding of the research and change their perspective of the process. I have determined this strategy to be effective based on my initial observations. To further investigate its plausibility and effectiveness, a pre- and post-test would be beneficial.

Encouraging positive research attitudes is best conducted through more creative avenues. Positive outlooks lead to more engagement in the research process and higher student learning. Deepening their learning requires a process of understanding the nuances of each scholar’s perspective and identifying how the voices conflict and coincide with one another. Developing a positive, engaged mindset in students requires instructors to initially move outside of the traditional essay format. Reflecting on the players’ conversations provides students with an expanded and more enriched outlook on writing, research, and learning.

References


Appendix A

Script Activity

The Literature Review Process

Step 1: Think of the scholars involved in the discussion of this topic.
Step 2: Find one theme within your topic which is repeated through the literature.
Step 3: Consider the perspective of each scholar on that theme.
Step 4: Find places within the sources where the scholar discusses his/her/their perspective.
Step 5: Begin composing a script of these sources.
Step 6: Determine the authority of each scholar.
Step 7: Find a location such as The Academic Tavern to set your discussion.

Writing the Script

The script involves creating a conversation among the scholars who discuss that theme with you. The script can involve direct quotes, paraphrases, or summaries of the sources. The authors should converse with one another, agreeing, disagreeing, and contributing to the discussion. As the writer of this script, you (labeled “Me” in the script) act as the glue of the conversation, interpreting, questioning and commenting on what the sources mean.

Note: For ease of converting this script into a paragraph, use page numbers after direct quotes.

Script Example

Me: Teaching students to write poetry with a social justice lens is a powerful tool that can lead to transforming mindsets about real-world issues. There are several social justice education theories that explain this impact.

Mthethwa-Sommers: Social justice education theories maintain that schools should serve as sites of democracy with all its inherent ideological, cultural, religious, and social diversity, and should serve to work toward social justice, a significant signpost of democracy (p. 10). One such theory is called critical theory, positioning the classroom as a place to converse and look at different perspectives.

Me: Mthethwa-Sommers sets the classroom as a prime place to discuss diversity and overturn unjust perspectives.

Stovall: Youth are consistently told to follow certain ideologies, but the classroom should serve to call attention to and give a voice to pertinent issues in youth’s lives.

Camangian: By avoiding and/or marginalizing critically relevant pedagogy in classrooms, we tolerate students’ self-defeating ideologies and practices that inhibit the individual and collective growth urban students can undergo in and beyond their communities (p. 53).

Stovall: I believe poetry can work to this end, especially spoken word.

Me: Spoken word poetry provides a voice in the vernacular of the community, bringing light to unattended issues.

Stovall: With hip-hop and spoken word poetry, students can critically think about the world and transform how they live in it.

Camangian: I developed a poetry unit in my classroom to give students a method to reflect on oppression in America. In this unit, students used poetic techniques to form their worldviews.

Me: Youth of this day face racism, sexism, poverty, low body image, and bullying—which require foresight to negotiate. Poetry repositions these issues by emphasizing the emotional consequences and hard facts of these issues through narrative and metaphor.

Camangian: Having a critical voice means finding the power to be heard, felt and understood while communicating transformative ideas in ways that effectively impact and challenge listening audiences (p. 39).

Stovall: To foster this critical voice, I believe teachers should listen to students’ ideas and help them recognize their part in shaping the rules and thoughts that provide structure to this world.

Mthethwa-Sommers: Students must see themselves as subjects instead of objects.

Me: In this way, poetry not only transforms mindsets but also enables students to become doers, impacting their communities for social justice.
Promoting Students’ Sense of Connectedness Using Strategic In-Class Groups

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Studies have demonstrated that in-class small groups have a positive effect on students’ learning (Johnson & Johnson, 2002; 2015). This study addresses the question of how strategic in-class small groups could affect students’ senses of connectedness with other students. In this study, students were grouped based on their scores on a college persistence questionnaire. Some students were in the groups with similar persistence scores, and some students were in the groups with contrasting persistence scores. Our results indicated that students in the contrasting persistence groups rated their small group experience as more positive, and they felt more connected with other students.

Introduction

The use of in-class small groups has been shown to improve academic achievement, improve attitudes toward learning, and improve the overall college experience (Springer, Stanne & Donovan, 1999; Johnson & Johnson, 2002; Johnson, Johnson, & Smith, 2014; Johnson & Johnson, 2015). Relatively few studies, however, have looked at the use of in-class small groups to promote students’ senses of connectedness in the college setting. Studying students’ senses of connectedness is important because it is one of the factors that affect student retention and persistence (Eckles & Stradely, 2012; Skahill, 2002). A student is more likely to persist in college if the person has stronger peer support and a sense of connectedness. This study describes a quasi-experiment that tests the idea of using in-class small groups to promote students’ senses of connectedness with one another.

Student persistence and retention are some of the greatest challenges faced by college administrators (Seidman, 2005; Tinto, 2006; Tinto, 2010). Personal, cultural, economic, and social forces all affect a student’s ability to persist in college (Tinto, 2006). The problem of dropping out from college is especially true among minority students (Berkner & Cataldi, 2002) and students from lower socioeconomic backgrounds (Walpole, 2003). Higher education institutions have responded with a variety of strategies, from increasing need-base financial aid to building learning communities (Tinto, 2010). Although many of these strategies have been proven effective, they require significant financial support from the institution. Moreover, they are generally not pedagogical strategies that could be implemented in the classroom. The use of small groups is one of the few in-class pedagogical strategies that has the potential to improve student persistence and retention (Springer et al., 1999).

Several theories could explain the cooperative process of a small group. These theories include the social-interdependence perspective, the cognitive-developmental perspective, the social-cognitive perspective, and the behavioral-social perspective (Johnson & Johnson, 2015). Of these theories, the social-interdependence theory has generated the most relevant research with practical implications. The social-interdependence theory proposes that group interaction is built upon the interdependence among group members (Johnson & Johnson, 2002; Johnson, Johnson & Smith, 2014; Johnson & Johnson, 2015). Within this theory, individual interactions could be described as positive interdependence, negative interdependence, or no interdependence. Positive interdependence is characterized by group members assisting each other, exchanging resources, giving and receiving feedback, and encouraging increased effort. Negative interdependence is characterized by group members focusing on increasing their own success...
No interdependence occurs when group members focus on their own success and ignore the efforts of others. The key in promoting group cooperation is to encourage positive interdependence through joint rewards, divided resources (e.g., giving each member a part of the assignment), and complementary roles (learner or tutor) (Johnson & Johnson, 2002). This study focuses specifically on how the composition of small groups might naturally lead to complementary roles, thus creating positive interdependence in the small groups.

To the best of the authors’ knowledge, no comprehensive guideline on forming small groups currently exists in the literature. Conventionally, instructors randomly assign students into groups or allow students to form their own small groups. The problem with student-formed groups or random groups is that some students would inevitably be in groups with all members being at high-risk of dropping out. Groups with all high-risk and possibly low-achieving students may find it difficult to promote positive interdependence. By definition, positive interdependence requires at least some group members to be dependable, encouraging, and capable of providing assistance and feedback. A small group made up entirely of high-risk and low-achieving students would have more difficulty in achieving positive interdependence. In order to avoid having this type of group consist entirely of high-risk students, instructors should strive to create contrasting groups wherein at least some of the students in the group are low-risk and high-achieving. The problem with this proposal is the difficulty to predict students’ risk level of persisting. A student’s cumulative grade point average might provide indicators for the person’s achievement level, but it does not account for recent changes of attitude or provide a real-time estimation of the person’s achievement level. This study proposes to use a modified version of the College Persistence Questionnaire (CPQ) to predict students’ risk level and group students accordingly (Davidson et al., 2009).

The CPQ gauges a list of factors including institutional commitment, degree commitment, academic integration, social integration, support services satisfaction, and academic conscientiousness (Davidson et al., 2009). Together, these factors allow the experimenters to predict a student’s persistence risk level at the beginning of the semester and group the students accordingly. The CPQ also provides measures of social integration and connectedness, which can be used to gauge the interdependence level of the small groups. Effective small groups promote positive interdependence, which in turn strengthens the students’ senses of connectedness and integration with each other. This increased sense of connectedness and social integration would presumably cause an increase in students’ college persistence level and lower their likelihood of dropping out (Eckles & Stradely, 2012; Skahill, 2002).

Method

Participants

A group of 22 college students from an upper-level psychology course took part in the study. Students received bonus points toward the course for their participation. All participants completed the beginning and the midterm surveys. Three students did not complete the final exit survey. Two of the three students had failed the class and withdrew, and one student missed the deadline to complete the final exit survey.

Materials

The survey used in this study was modified from the CPQ instrument developed by Davidson and colleagues (2009). The original questions from the CPQ were kept, and the authors of this paper included additional measures such as GPA and ACT scores for the beginning survey. The addition of these measures was meant to predict students’ academic performance in addition to the self-reported items. The midterm and final exit surveys did not include questions related to GPA or ACT score, but used questions that measured students’ social integration and senses of connectedness from the CPQ. The surveys used in this study can be found in the Appendix section. Most of the questions on the survey were on a Likert scale with five options.

Procedure

This study was conducted in the form of a quasi-experiment. All 22 students attended a lecture together and were split into two lab sessions with 11 students each lab. The lab sessions were divided based on students’ enrollment choices. Each lecture
and lab was 50-minutes in length. The class met three times a week for a total of 16 weeks.

At the beginning of the semester, the course instructor asked students to fill out the beginning survey instrument and calculated a cumulative score for each student based on the questionnaire. Each item on the question had a score of 1-5, with 1 indicating higher risk of non-persistence or lower-achievement level. The lower the cumulative score, the greater was a student’s predicted risk of not persisting. The students were then divided into groups of two or three based on their CPQ score and their lab designation. For one lab section, the instructor grouped students based on similar CPQ scores. The CPQ scores were ranked; students with the highest CPQ scores were put in the same group, and the students with the lowest CPQ scores were placed together in another group, and so on. For the other lab section, the instructor grouped students based on contrasting CPQ scores. The instructor first ranked students by CPQ score and then paired students from the top. For example, rank 1 was paired with rank 6, rank 2 was paired with rank 7, and so on. This pairing methodology produced contrasting risk level groups with each group having similar CPQ score deviations. For the group with three members, two members had similar CPQ scores and one member had a different CPQ score (rank 5 was paired with ranks 10 and 11). A significant correlation existed between the original CPQ cumulative score that was used to group students and students’ final course grade, \( r=0.54, n=22, p<0.05 \). This indicated that students’ CPQ scores were predictive of their learning outcome. The double-blind grouping process was done using student’s identification numbers. The experimenters were unaware of each lab’s grouping manipulation until the end of the semester.

All participants attended the same lecture from 12:20 to 1:10 pm. The instructor employed a flipped-classroom teaching method in his lecture so that students consistently spent approximately 20 minutes during each lecture to work on problems together in their groups. At the end of every class, each group also participated in a quiz challenge through an online quiz manager called “Kahoot!” to earn bonus points. The quiz challenge was formatted as a game and students were not penalized for their attempts. The same bonus points were awarded to all group members of the group that had won. After the lecture, students attended separate lab sections. The lab session began with a timed quiz through Blackboard Learning Management System. Students were not allowed to use their books, but they were allowed and encouraged to collaborate with their lab partner(s). Unlike the Kahoot! challenge, the quiz hosted in Blackboard LMS was graded. After the quiz, students worked together on practice problems and writing assignments. The structure of the course allowed many opportunities for students to collaborate within their small groups.

The complete CPQ survey was given to the students at the beginning of the semester. Students received a second survey during midterm using questions from the original CPQ survey but focusing specifically on the social integration aspect. The same survey given at midterm was given again at the end of the semester. The specific questions can be found in the appendix section.

**Results**

**Comparing Results from the Beginning of the Semester to Midterm**

The difference between students’ ratings on the social integration factor from the beginning of the semester to midterm was calculated. A one-way ANOVA using grouping strategy (contrasting risk-level group versus similar risk-level group) as our independent variable, and each of the 10 questions on social integration as the dependent variables was conducted. Our manipulation had a significant main effect on three dependent variables (\( \alpha=0.05 \)), including Common, StudentConnection, and Impression. The effect size of the grouping manipulation on all three dependent variables was large (partial \( \eta^2 >0.2 \)). The Common variable measured how much commonality students felt they had with other students at the university, \( F(1,20)=6.173, p<0.05 \). The StudentConnection variable measured students’ sense of connectedness with other students, \( F(1,20)=5.104, p<0.05 \). The Impression variable measured students’ overall impression of other students, \( F(1,20)=6.957, p<0.05 \). Students in the contrasting risk groups experienced an increased sense of commonality, connectedness, and impression from other students, whereas those in the similar risk groups experienced a decreased sense of commonality, connectedness, and impression from other students. Our group-
Inclass manipulation had no effect on the remaining seven dependent variables probably because they did not relate to students’ in-class interaction. For example, students’ sense of connectedness with staff and faculty members were not affected by our manipulation. Figure 1 summarized the results of the three dependent variables.

In addition to the three dependent variables shown in Figure 1, a main effect of grouping strategy on students’ rating of the overall effectiveness of the small groups was also found, \( F(1,20)=5.952, p<0.05, \) partial \( \eta^2=0.229 \). This rating was the difference between the beginning of the semester and midterm; it was a Likert-scale rating from 1 through 5, with 1 being no collaboration and 5 being very effective. The students in the contrasting risk-level groups (\( M=4.36, SD=0.505 \)) rated their small group experience as being more effective than students in the similar risk level groups (\( M=3.445, SD=1.128 \)).

**Comparing Beginning of the Semester and the End of the Semester**

The difference between students’ ratings on the CPQ from the beginning of the semester to the end of the semester was calculated. A one-way ANOVA was used to analyze the change in ratings for Common, StudentConnectedness, and Impression. No significant main effect was observed. Two of the lowest performing students had dropped out from the class by the end of the semester, and one high-performing student did not complete the final exit survey. There was, however, a significant effect of the grouping manipulation on students’ perceived sense of small group effectiveness, \( F(1, 17)=10.906, p<0.05, \) partial \( \eta^2=0.391 \). Similar to the midterm rating, the students in the contrasting risk groups (\( M=4.50, SD=0.527 \)) rated the small groups as more effective than students in the similar risk groups (\( M=3.22, SD=1.093 \)).

**Discussion**

The use of in-class small groups has been shown by past studies to be an effective method in promoting learning. More specifically, small groups could promote positive interdependence and thus lead to an increased sense of connectedness and persistence. This study specifically looked at how contrasting risk-level small groups could promote social integration and a sense of connectedness.

Our findings indicated that students who were in the contrasting risk-level groups showed an increased sense of connectedness and commonality with other students. They also had a more positive impression of other students as the semester progressed. Two possible explanations exist for these findings. First, the positive interdependence interactions during lecture and lab time could have fostered complementary roles within the contrasting risk-level small groups. As students worked together, the lower-risk high-performing students took on the role of tutors for the higher-risk, low-
performing students in their groups. This type of natural complementary roles could have fostered students’ sense of connectedness, commonality, and increased their impression of other students. Conversely, students who were put in similar risk-level groups probably felt less of a need to depend on each other and were less likely to form complementary roles. The lower sense of interdependence (or possibly no interdependence) resulted in comparatively lower sense of connectedness and commonality with other students. Second, it was possible that although both contrasting and similar groups rated the small groups as being generally useful, the interactions that occurred in the contrasting small groups were more meaningful and in-depth. Being able to learn from one another in the contrasting groups probably caused students to feel a stronger sense of connection. On the other hand, students in the similar risk groups were probably only affirming each other’s ideas during a quiz or lab assignment. This type of mutual affirmation probably did not promote positive interdependence with the similar-risk groups.

As with any quasi-experimental studies conducted in the classroom, a few limitations exist in this study. First, it is not clear if a systematic difference in the students who had self-enrolled in the different lab sessions exists. Second, many uncontrolled personal factors such as illnesses and personality differences could have affected the outcome of the study. Third, the study had a small sample size with missing data from three students at the end of the semester. The small sample size and missing data were probably the main reasons for the lack of difference when comparing students’ rating between the beginning and the end of the semester. Nonetheless, the findings from this study provided a promising start for a learning strategy that could possibly improve student retention by increasing students’ senses of connectedness with their peers. Future studies should try to replicate the findings using students from lower-level courses with higher enrollment numbers and also collect more qualitative responses. Lower-level courses usually have greater student diversity, and students in lower-level courses could benefit more from this type of intervention strategy.

References
Appendix

A modified version of the College Persistence Questionnaire was given at the beginning of the semester. The name in the parenthesis is the name of the dependent variable. The highlighted questions (8-17) were the questions related to social integration and were the targeted questions on the midterm and final exit surveys.

1. How well do you understand the thinking of your instructors (in general) when the instructors lecture or ask students questions? (Instructor)
2. How satisfied are you with the extent of your intellectual growth and interest in ideas since the beginning of your college career at this university? (Growth)
3. In general, how satisfied are you with the quality of instruction you are receiving at this university? (Quality)
4. How interested are you with the topics presented in this particular course? (Interest)
5. How much of a connection do you see between what you are learning in this course and your future career possibilities? (Career)
6. After reading the syllabus, I believe that this course is harder than it should be. (Syllabus)
7. I prefer to work by myself than collaborating in a group. (Group)
8. How much do you think interpersonal relationships with other students can impact your personal growth, attitudes, and values? (Interpersonal)
9. How much do you think interpersonal relationships with other students can impact your intellectual growth and interest in ideas? (Interpersonal 2)
10. How much do you think you have in common with other students here? (Common)
11. How strong is your sense of connectedness with the professors on this campus? (Professor)
12. How strong is your sense of connectedness with other students on this campus? (Student-Connection)
13. How strong is your sense of connectedness with staff members who are not professors (e.g. your academic adviser)? (StaffConnection)
14. When you think about your overall social life here including friendships, college organizations, extracurricular activities, and so on, how satisfied are you with yours? (Social)
15. How many of your friends are here at EKU rather than at another school or do not attend school? (Friends)
16. What is your overall impression of the other students here? (Impression)
17. How often do you wear clothing or use items with EKU’s logo? (Clothing)
18. How satisfied are you with the academic advisement you receive here? (Advisement)
19. How well does EKU communicate important information to students such as academic rules, degree requirements, individual course requirements, campus news and events, extracurricular activities, tuition costs, and financial aid and scholarship opportunities? (Communication)
20. How easy is it to get answers to your questions about things related to your education here? (QuestionAnswer)
21. How much input do you think you can have on matters such as course offerings, rules and regulations, and registration procedures? (Input)
22. If you have needs that are different from the majority of students here, how well does this university meet these needs? (Needs)
23. How fairly do you think student concerns and complaints are handled here? (Fairness)
24. When you think of the people who mean the most to you (friends and family), how do you think they would respond if you decide to withdraw from EKU? (Response)
25. At this moment in time, how certain are you that you will earn a college degree? (Degree)
26. At this moment in time, how strong would you say your commitment is to earning a college degree either here at EKU or elsewhere? (Commitment)
27. How supportive is your family of your pursuit of a college degree, in terms of their encouragement and expectations? (Support)
28. How confident are you that EKU is the right university for you? (Confidence)
29. How likely is it that you will re-enroll here next semester? (ReEnroll)
30. How much thought have you given to transferring to another college, going to work, or leaving for other reasons? (Transfer)
31. How often do you miss class for reasons other than illness or participation in school-sponsored activities? (MissClass)
32. How often do you turn in assignments past the due date? (Late)
33. How many hours do you spend studying per week on average, outside of class time? (Study)
34. I am generally disinterested in academic work and want to do as little as possible. (Interest)
35. My current GPA is
   ● Below 2.0
   ● 2.0-2.5
   ● 2.6-3.0
   ● 3.1-3.5
   ● 3.6-4.0 (or above)
36. My high school GPA was
   ● Below 2.0
   ● 2.0-2.5
   ● 2.6-3.0
   ● 3.1-3.5
   ● 3.6-4.0 (or above)
37. My latest ACT score was
   ● Below 15
   ● 16-20
   ● 21-25
   ● 26-30
   ● 31-36
   ● N/A
38. I am eligible for Pell Grant
   ● Yes
   ● No
   ● Not Sure
39. Number of hours I work on a weekly basis (in addition to being a student)
   ● 20+
   ● 16-20
   ● 11-15
   ● 6-10
   ● 0-5
40. Number of dependents you have (people who are financially dependent on you)
   ● 5+
   ● 4
   ● 3
   ● 2
   ● 1
   ● 0

Additional question that was included only in the midterm and the end-of-semester questionnaires
41. Overall, how effective have you and your group member(s) worked together?
Multimodal Composition in Practice

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Traditional composition is in question today due to the seemingly limitless online resources available to students. There are a variety of ways to construct assignments via visual, audio, and video presentation software and online sites. Instructors need to examine what students are doing online in their private spaces in order to adapt and evolve academically. Instructors are also faced with a re-examination of professional development and training where they should be taught to understand and evaluate multimodal assignments based on criterion that are based more on principles of design and creativity than on standard text.

Introduction

In today’s spectrum, making use of student-favored technology is integral to effective communication and composition. Often regardless of age or background, students are constantly composing text messages, engaging with blogs, using social media, and interacting with their portable phone screens and tablets. An issue all educational disciplines face, then, is the evolution of the written word: the transformation of print to the dominance of visual composing through multimodal software and online hypertext. Educators must now focus their instructional methods to incorporate computer-based composition, especially how hypertext impacts student engagement. Work such as that by Bernhardt shows that within the multimodality of hypertext, interactivity is necessary for student understanding and through electronic and visual mediums students become participants who can shape their learning outcomes and performances (Deacon, 2001, p.5). Students are now designers rather than writers, composing online visual presentations such as with Prezi and Slides, or posting video content via sites such as YouTube or Vimeo. Such use of technology in the classroom is also co-dependent on the educator’s implementation process, which is at the heart of New Media Pedagogy. Visual composition will revolutionize the classroom by immersing students with image, audio, and video-based modes of communication in order to develop enhanced student composition across the disciplines.

Argument

A significant cultural and proactive advantage can be seen in the transition from text to visual composition. Academic print text has always been concerned with the fixed development of the thesis, organization of content, source integration and sustaining an argument. While all of these attributes function well within the confines of print text, many instructors have wondered whether or not images and visuals could express meaning in the same way and more effectively. Evidence for such concerns is found in the Grushka (2010) article on discourses related to “Visual Learning and Performative Pedagogy,” where the impact on the student is a “socio-cultural” one in which students learn to decipher the meaning behind images in a critical way that provides a deeper connection to life experiences and visuals, allowing for students to engage in a representational analysis of complex subjects (p. 21). Diverse students can gain unique cultural insights and understandings through familiar online “memes,” icons, or other visual aids which could connect people separated by languages and distance. Images, therefore, are a way of providing meaning, attempting to break cultural barriers, and establishing a set of visual skills that aren’t present in print-based texts which are frequently obscured by language constraints. While the traditional essay or research paper still provides essential writing strategies, instructors can demonstrate that students gain a better sense of ownership and design
when composing visually, aiding in the belief of an inclusive and creative academic sphere.

Creativity in visual composition allows for a deeper dimension to student communication connecting the academic student with the digitally literate public outside. This insight touches on the ideas within Kumpf’s article on “visual metadiscourse,” which argues that visuals ignite a type of cognitive creativity, combining both traditional academic prowess with an attention towards visual design. For example, Kumpf (2000) uses a student assignment, a travel brochure, to demonstrate visual effectiveness. The assignment creates visual metadiscourse in three ways: first, initial impression and curiosity when the viewer wants to find what is behind the folds of the brochure; second, attraction that invites the viewer further into the visual brochure by opening it; and, lastly, overall visual engagement where the reader or viewer is changed by one piece of information which builds on the next, creating a transformative experience (p. 414). The public might not have the time to read a long text-based research paper, but if that student’s research is translated to an accessible website or eye-catching video, the world of academia becomes more accessible to the digital public. This conversion leads to the conversation of the practical use of multimodality, how such composition can be defined, and what instructors must do to successfully integrate it. Concepts such as visual metadiscourse proactively engage with learning outcomes, suggesting that multimodal texts build upon existing knowledge by not only drawing the reader’s attention, but influencing reception of texts, keeping the student in a suspended state of discovery (Kumpf, 2000, p. 401). Creativity within multimodality, therefore, utilizes three dominant features—visual, audio and video tools—to engage with the public, which in turn allows academics to reach more people and establish ideas faster.

Multimodal composition is academic creativity, but also demonstrates digital innovation. One aspect of visual composition is that it allows for the student to explore alternative mediums to support their arguments or research. A student studying the psychological strategies of the advertisement industry might benefit more from a visual aid or a multimodal project that shows the impact of colors on the human brain. Concerning the promise of digital composing linked to student collaboration, DigiRhet.org (2006) explains that the tools of technology provide a connection among students in order for participation and inter-communication to thrive where it did not exist before, and, because of digital spaces, ideas can now be distributed and understood faster among diverse groups of people (p. 238). Such rapid circulation of ideas could also be seen if a student performed a research study on the history of radio broadcasts’ impact on the general public, which could be more effective by using a series of podcasts rather than the traditional research paper. The ultimate goal in multimodal composition is to develop advanced student discourse practices that allow for creativity while demonstrating the innovative thinking skills students develop when engaging with multimodality, whether visual or audio.

Interaction within composition can easily be associated with aurality and the value of such audio compositions. Selfe (2009) emphasizes the power and usage of audio compositions as well as the interaction process within text, and even at certain intervals in the article on aurality, Selfe actually instructs readers to stop and turn their attention to a website link that will connect them to the next section. Discussing an audio poem by Elisa Norris, for example, Selfe (2009) comments that through hearing Norris’ voice, the poetic images and the music place listeners in a position to understand and identify with the poet’s heritage because the interpersonal dimensions of audio-composing create empathy and subjugate racism and bigotry (p. 626). This view suggests an integration of interactive multimodality within the text that can reach the listener or viewer. However, Selfe’s reflection also demonstrates that it is good practice for instructors to gain experience engaging with various software and resources available to them to better inform students of how to make use of audio programs such as Audacity, GarageBand, and PodBean for instance. Even as instructors write and discuss multimodality within print text, discussion must preferably expand to digital communication. Print and multimodal texts must be assessed equally in order for instructors to understand when strategies work between different mediums.

One innovative way for any field to incorporate multimodal composition in a variety of mediums is with book reviews or interactive
compositions. The traditional book review has been seen as an assignment for students to recite main points, research angles, and subject matter; however, the design of multimodality is not to enhance memory skills necessarily, but design skills. Students from all disciplines can take what they read from their class texts and make use of Adobe programs, Macromedia Flash, or similar tools in order to demonstrate understanding visually. For example, such programs could be used to create an interactive visual of how a cell functions in biology, psychological disorders in children within child development, or even providing a more visual way of understanding a novel or essay. Importantly, as Tulley and Blair (2009) discuss, integrated multimodality does not suggest that only one course or one field should be offered to instruct students, but instead such integration should be used to rethink all genres of studies so students can build critical thinking and writing skills using the technologies they already use from day to day (p. 442). By assuming that students from a multitude of disciplines are engaged with technology, multimodality within English studies, where most students start, has a further use: the interdisciplinary cross-over within other fields. Using online sites to compose visually will ultimately create better understanding in how students assess the texts they read for class, further aiding in their development.

Another advantage of multimodality outside of the academic setting is the cultivation of more professional students. While the academic essay and research paper function as the traditional way of gauging a student’s writing, instructors should also gauge whether a student’s research will deliver a valuable skill after a paper has been finished. If a student becomes familiar with an online software program that allows free access, for example, a student will likely find these programs useful for further assignments in a number of fields. Through audio composing, for example, Selfe (2009) is in clear conversation with Grushka’s discussion on multimodality’s impact in that students can construct texts that transcend social and cultural barriers through interpersonal communication (p. 626). Not only with cultures, but outside of English courses, such skills will be valuable in other fields as well such as advertisement, video, and business-related careers. For example, if a student is familiar with how to use info-graphic sites to show the data of profits a company gains over a year, the knowledge of how to present that information will make the student a valuable asset to the digital workplace. A student who can navigate, select, and utilize the correct digital site for a project or assignment will be valuable, whether in a group of other students doing a project or at singular office jobs for a company. Instead of only focusing on print essays that students may be forgotten, multimodal sites and projects will remain in a student’s active digital toolbox because the skill is constantly reinforced during the course of a day by the student’s normal digital usage. Possessing the knowledge of these multimodal sites will allow for an overall reformation of how students look at and tackle their work.

With such mediums of multimodal composition available, the advantage of digital composition allows for deeper reflection and interaction with assignments. Multimodal and visual composition provides great gains for a wide number of reasons, but it is through the instructor that students engage with such modes. Hocks (2003) elaborates on how digital writing environments should be understood by the instructor as well as the proper way of making sense academically for students. In “Visual Rhetoric within Digital Environments” Hocks explains Anne Wysocki’s uses of digital space “visually challenge the reader’s sense of order and design; the readers of this journal leave this essay having actually experienced a new way of seeing what was previously invisible” (p. 638). Wysocki’s “Monitoring Order” uses colors, visual metaphors, and graphic repetitions to offer deep reflection about intuitions, presumptions, and mindsets regarding the visual in relation to text, ultimately turning the reader or viewer into a potential designer (Hocks, 2003, p. 638). Hocks’ analysis of Wysocki shows how students’ work will be much more engaged and reflective once creative aspects are taken into account. Furthermore, digital spaces also will cause students to be aware of their peers as “visitors” as opposed to only fellow writers. This awareness is yet another example of digital composition creating a beneficial and reflective interaction when students provide feedback based on what they see rather than what they feel forced to read. For the instructor, once the benefits are acknowledged, then it becomes a question of how to evaluate such work.
When instructors properly utilize multimodal sites, understand the benefits, and gauge the reactions of the students, they will also have to change the grading process from mere static evaluation to a dynamic range of examination. Essentially, if multimodal assignments are substituted for print texts, then instructors must realize that their grading and feedback to students will also need to be based more on the elements of design. In conversation with this subject, Krause (2004) discusses the awareness of “The Three C’s of Design”—composition (placement, spacing, flow), components (photos, icons, backgrounds), and concept (message, style, theme)—as ways of providing a framework for analyzing a multimodal assignment’s effect (p. 10). By carefully examining these principles, instructors can create new rubrics or criteria, asking, for example, if an appropriate color palette is used, is the spacing proportional, and is the overall theme cohesive. New rubrics will have to stress unity—that a design is effective when all of the components, concepts, and composition are working together to attract the correct audience and establish intent (Krause, 2004, p. 11). Understanding these techniques for grading can also be seen in video content as well as visual. In an article on multimodality and meaning, Duncum (2004) also shows this fluency with evaluating student-generated film by suggesting students must understand how ideas and atmospheres are established through the use of the camera, lighting, editing process and techniques, as well as sound which establishes mood for the viewer (p. 260). Instructors, then, must not only be aware of the tools and techniques used in multimodal composition, but also in order to properly evaluate student work and to prevent one of the greatest fears among educators today, falling behind in the eyes of the students; they will have to adjust to new rubrics.

**Conclusion**

As the digital age is upon us, multimodal practices must be taught now to avoid the problem of anachronism or stagnation in the classroom. Whether with the actual assignment or the grading process, instructors must adapt to practice flexibility, even if the challenge with multimodality is overcoming personal troubles with technology. In discussing the Anne Wysocki hypertext “Monitoring Order,” Hocks (2003) states that the “hybridity” of the web as a medium focuses on the juxtaposition between images and text co-existing in one “constructed, heterogeneous semiotic space,” wherein Wysocki combines different elements in thought-provoking but non-traditional ways (p. 637). He demonstrates how the Wysocki hypertext makes use of buttons and menus to help the visitor navigate through the information. This flexibility of the web is useful because it challenges traditional structures and can lead to new discoveries. Tulley and Blair (2009) harken back to Kumpf’s theory when they discuss the connection between hypertext and collaboration in which the reader becomes a participant who can “manipulate the initial author’s text, complicating and broadening the notion of authorship” (p. 445). The transformative nature of a text should be the author’s purpose and what learning students should strive for through proper instruction.

Multimodality, then, provides the answer to educational lapses and seeks to enhance education and professional development for all who engage with it. More training programs should be available and potentially required of faculty across the disciplines to develop at least a general understanding of multimodal usage, as the need for it will increase in years to come. Metros (2008) affirms that education involving the Internet and multimedia will enhance visual composition and will create a more dynamic purpose that will reach a multitude of audiences, accelerating and affecting learning outcomes and behaviors (p. 106). The future of composition studies and composition in other fields greatly hinges on the ability for instructors to at least demonstrate minimal fluency within technology options available as students continue to express themselves in multimodal forms. Perhaps educational institutions can converge with students’ private online composing spaces to develop new academic writing environments as well. New Media Pedagogy and multimodality are not criticism of print texts, but practices that expand students’ abilities to reach their audiences in a variety of new and malleable ways within the shifting nature of academia.

**References**


