ADVANCES IN EXEMPLARY INSTRUCTION

Proven Practices in Higher Education

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Preface

This book is the fourth in the Proven Practices in Higher Education series dedicated to sharing a collection of practices from a group of faculty members at a single university. City University of Seattle (CityU) is a small, private, nonprofit university primarily serving working adults in the Pacific Northwest, with satellite campuses in eleven countries on four continents. Through in-class, online, and hybrid delivery, CityU offers programs in education, leadership, management, technology, psychology, healthcare administration, and general studies to students worldwide, many of whom would otherwise be denied access to education.

CityU is primarily a teaching institution; the institution has utilized technology in offering instruction for most of its forty years of operation, and has been ahead in its use of technology in education for that reason. Academic programs focus on delivering real-world skills, in an applied manner, that help students achieve professional goals. The vast majority of the university's faculty members are working professionals who are selected to teach what they do for a living. Over the years, one of the hallmarks of a CityU education has been the link to real-world applicability that comes from the connections that the university's seven hundred practitioner faculty members bring to their classes.

While the university provides its faculty members with orientations and periodic trainings, faculty members often learn more by collaborating with their peers, sharing strategies for educating adults, and seeing the engagement that occurs from implementing these ideas. Over the years, it has become evident that the university has accumulated a rich collection of valuable educational strategies that can and should be shared with teaching faculty from similar institutions worldwide. This is the driving force behind the Proven Practices in Higher Education series.

The first volume in the series, *Authentic Instruction and Online Delivery*, is a collection of successful practices of faculty members who respond to the busy schedules and time constraints of today's adult student to help

them achieve their learning and professional goals. This resource reveals how teaching that is developed through instructor experience has much to offer both novice and veteran educators. Three themes emerged in this volume: methods of authentic instruction and real world applicability; online design and delivery; and emerging themes in educational assessment and program revisions.

The second volume in the series, *Innovations in Teaching Adults*, is a collection of innovative teaching methodologies that CityU faculty members have successfully implemented across many disciplines at the university. This book is designed to help educators deliver the personalized feedback and interaction that today's adult students expect. It shares ideas beyond the traditional lecture that will grab students' interests and teach them the skills they can immediately use in their careers. Four themes emerged in this volume: the roles that students and instructors play in fostering engagement; innovative ways in which students can authentically engage with their learning; innovative practices in curriculum design and delivery; and innovative research strategies associatively applied in specific fields of studies.

The third volume in the series, *Strategies for Teaching Leadership*, is a collection of instructional strategies covering leadership practices in educational settings. There are theoretical underpinnings to leadership, lessons to be learned from styles and application that can make one a better and more effective leader. It is these aspects, and how one goes about transferring those attributes and knowledge in the most efficient and meaningful way to students, that is the focus of this book. Four themes emerged in this volume: leadership theories and instructional integration; transformational leadership; leadership education in multiple settings; and behavioral aspects of leadership.

And finally, this volume, *Advances in Exemplary Instruction*, is a collection of innovative ideas for developing robust and relevant course content to engage today's learner in evolving instructional formats, including online and hybrid delivery. By considering course development through a three-pronged engagement framework, faculty can better understand how to create rigorous, interesting, and unique learning modules. Three themes emerged in this volume: student-to-content engagement; student-to-student engagement; and student-to-self engagement.

As with the first three volumes of the Proven Practices in Higher Education series, the chapters in this book reflect the combination of research, theory, and practice, as well as real-life experiences, of some of the best educational teachers and educational leaders. We hope our readers will find new ideas and strategies to advance their course development and instruction in exemplary ways.

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Introduction

Opening the Aperture: Considering Multiple Approaches to Student Engagement

Susan Seymour and Erin Noseworthy

Activities aligned with professional skills and competencies are necessary for post-graduate success, yet higher education institutions struggle to find unique ways to engage students in "real-world" applications. Diverse student populations and increasing numbers of students choosing to take online or hybrid courses compound this challenge. Although online courses expand the boundaries of university classrooms and are an increasingly integral part of the student experience, it is essential that online students have the same opportunities for engaged learning as their face-to-face counterparts.

This book presents ideas for developing robust and relevant course content through student-to-content, student-to-student, and student-to-self engagement frameworks. Student-to-content engagement represents the different ways students explore content from typical reading assignments to podcasts, video, graphics and project-based learning. Student-to-student engagement facilitates the application of learning through collaboration and interactions such as discussion, role-play, case studies, and group work. Student-to-self engagement facilitates reflection and learning awareness through journal-writing, personal and professional experiences, application to real-life situations, and identity exploration. By considering course development through this engagement framework, faculty can better understand how to create rigorous, interesting, and unique learning modules.

Student-to-Content Engagement

One of the most important issues in the design of education is the sequencing of instruction. The order and organization of learning activities affects the way information is processed and retained. Sequencing allows for scaffolded learning through content that builds upon previous concepts, which encourages motivation during learning and, more importantly, retention of learning. When developing content for instruction, sequencing can be intuitive. However, to ensure learners will meet learning goals and objectives, content should be systematically considered in the context of course design, facilitation strategies, instructional media, project-based learning, and student support.

Course design. Many design techniques utilize a simple-to-complex sequence, suggesting a cumulative strategy. Others allow learners the freedom to choose their own learning sequence based upon mastery of prerequisite lessons or available instructional components. Some designers sequence the instruction to achieve specific goals, whereas others prioritize gaining broad knowledge for a particular domain. While no 'perfect' strategy exists for sequencing instruction, designers should determine the optimal breadth and depth of content to ensure learners attain course outcomes. Determining the level of content is one key challenge in the design of competency-based programs. To explore this topic more fully, please review the chapter *Effective Course Design for Student Success*.

The experimental psychologist George Miller (1956) found that the number seven (plus or minus two) described the maximum quantity of ideas, facts, or issues that people can actively attend to at any one time. Miller's concept, called *The Rule of Seven,* evolved from the observation that recall capabilities significantly decrease as increasingly complex concepts are delivered. To enhance and maximize learning potential, course designers should develop content with this rule in mind by dividing content into manageable units of information. This dividing of content is called *chunking*. Chunking enables students to focus their attention on key concepts and reduces cognitive overload, thereby enhancing the power of retention and recall.

Facilitation strategies. Once content is optimally chunked and sequenced, instructors can then facilitate student-to-content engagement. Typical methods for facilitating student-to-content engagement include

assigning readings from a textbooks, peer-reviewed journals, or other periodicals; exploring websites or web articles; and viewing micro-lectures and/or YouTube videos. While these techniques are effective, many instructors are eager to use new and innovative approaches to delivering content and engaging students. Examples of innovative approaches may be found in the chapters entitled *Using Video to Connect Learners in the Online Course* and *Modus Mashup and "Dungeon Master": Integration of Media and Activities that Simulate and Stimulate in the e-Classroom*.

Instructional media. As demonstrated in several chapters of this book, instructional media can play a vital role in enhancing the learning environment. Media can include any teaching aid or resource used as a part of an instructional sequence to demonstrate or clarify course content. The use of media can lengthen the average adult's attention span by strategically refocusing attention. Estimates show that 75% to 95% of what we learn comes through the sense of sight, 10% to 15% through hearing, 3% to 4% through smell, and 1% to 2% through taste and touch (Cantor, 1992). The combination of audio and visual media is more effective than either medium used alone, with learner retention significantly increased over a longer period of time (Cantor, 1992).

In addition to building media into course content, instructors can also ask students to engage with content by having *them* create media. For example, students can create videos, podcasts, or screencasts that represent their own consideration and exploration of the course material. To receive feedback from others, students can present this media in class or in an online discussion forum.

The use of video, podcasts, screencasts, graphics, and other media reinforces concepts studied in class for both auditory and visual learners, develops writing and reading skills as students prepare scripts, fosters analysis as students consider storyboards and layout formats, and enables the use of alternative assessments beyond traditional tests and papers. Graphics (photographs, diagrams, or drawings) are another media that may deepen student engagement with content. Claggett and Brown (1992) indicated that graphics help students make meaning as they read and write and that the use of graphics enables students to observe, analyze, imagine, and feel as they interact with course content.

Student-created media offers alternatives to more traditional student assignments. Rather than reading materials and writing a paper, students

might develop a newsletter, create a video, create an oral presentation, display photographs and describe steps in a technical demonstration, take a virtual field trip, and much more. Instructors interested in assisting students in developing these media competencies will benefit from reading the chapter entitled *Who Am I Online? Cultivating Students' Digital Identity Practices*. Students learning to be digital citizens can develop research skills and build communication skills through opportunities to express their opinions, argue points of view, and share ideas.

Using media for alternative assignments and assessments diversifies instructional content, but for instructors to achieve optimal learning and engagement, these strategies should support assessment of student learning outcomes and promote original thought. In other words, although it is necessary for instructors to think about assessments in new and interesting ways, they also need to ensure the assignments are authentic and relevant to the students. This will engage them in deeper learning and promote original work. For more information about creative assessment strategies, see the chapter entitled *Improving Student Engagement and Participation through Student-centered Assessments* and for academic honesty concerns, review the chapter *Pedagogical Strategies and Training to Avoid Plagiarism*. Plagiarism applies not only to written assignments but also in the development of multimedia assignments. Facilitating student understanding of these dynamics and preparing them to navigate the development of alternative forms of content will give them "real-world" experience that translates to business and industry. Thus, by using media to broaden content exploration, students stay more engaged and their learning prepares them to be more innovative in their work environments.

Project-based learning. Another powerful way to engage students with content is through project-based learning (PBL). PBL is an instructional method that provides students with complex tasks based on challenging questions or problems that typically culminate in relevant artifacts used to assess student competence. The core idea of project-based learning is that real-world problems capture students' interests and provoke serious thinking as the students acquire and apply new knowledge in a problem-solving context. The teacher plays the role of facilitator, working with students to frame worthwhile questions; structure meaningful tasks; develop the applicable knowledge and skills; and carefully assess what students have learned from the experience. In the development of a project, students

learn from their experiences and apply this learning to the world outside their classroom. In PBL, faculty roles and responsibilities shift from choosing and delivering knowledge to facilitating knowledge acquisition. This shift in responsibility creates unique tensions for instructors as students become increasingly responsible for their own learning, while still needing structure and reassurance throughout their learning processes.

Student support. Whether using PBL or other forms of engaged learning, maintaining the right balance between instructor presence and oversight and student self-direction deserves careful consideration. Ultimately, students who are taking responsibility for their own learning, while balancing the demands of their life, need to feel supported while they master their learning. For advice on support mechanisms that foster learning without taking away students' own learning responsibilities, see the chapter *Exemplary Practices in Student Support*.

Student-to-Student Engagement

A common misperception of today's online students is that they are isolated in their learning. While this might be the case for some students, it need not be the norm. When designing an online course, typical face-to-face interactions, discussions, and learning engagements can be reconceptualized for online delivery. Reimagining traditional educational approaches provides opportunities for instructors to improve learning outcomes and assist students in engaging with content. The techniques for fostering student-to-student engagement stem from traditional face-to-face pedagogies but are modified for use in mixed-mode or online classrooms. Specifically, we will explore discussions, case studies, and role-play; the use of social media in the classroom; and collaborative learning or group work.

Discussion is central to all modes of higher education delivery, and careful preparation of discussion questions helps maximize student reflection and learning. Regardless of the question's intent or design, facilitating dialogue through questions is particularly important but can also be challenging. The following strategies might help instructors foster a variety of discussion experiences, regardless of whether they are teaching virtually or in person: student-created questions, real-world examples, social media, teamwork, and collaborative learning groups.

Student created questions. Faculty may feel it is their responsibility to create discussion questions, but there is merit in having students develop questions for discussion. For example, you can have students create a series of questions from a reading assignment, with each question moving to a "higher" level of thinking. Begin by asking for a question about an important fact stated directly in a text. Then ask them to develop a question that revolves around two relationships, ideas, characters, or events addressed in the reading. At the next level, ask students to write questions requiring answers drawn from two pieces of information in one text or from relationships among many pieces of information spread throughout the assigned readings. Finally, students can create questions that ask students to relate their reading to everyday life, issues, and contexts. Students can take turns developing the questions and the questions can be peer evaluated to maintain high standards of question development. Shifting question development to students can broaden perspectives explored in discussion environments and enable faculty to utilize their time in facilitating learning and pushing dialogue rather than in developing discussion questions.

Social media. Another tool to foster student-to-student engagement is social media, which is discussed in the chapter *Facebook Groups and Pages Integration in the Higher Ed Classroom*. As an educational tool, social media enriches the learning experience by allowing students and teachers to connect and interact in new and exciting ways. Web sites such as Facebook, Twitter, and LinkedIn provide a platform where instructors can foster collaboration and discussion, create meaningful dialogue, exchange ideas, and boost student interaction. Social media is an effective way to increase student engagement and build better communication skills, particularly for students who feel more comfortable expressing themselves virtually. Furthermore, students entering today's workforce may benefit from social networking sites by utilizing them to stay current in their field and find employment. With LinkedIn, students can establish a professional web presence, post a resume, research a target company or school, and connect with other job seekers and employers.

Teamwork. The ability to work in teams is another critical competency for today's workforce, but developing group work that positively contributes to student-to-student engagement is challenging. Part of the challenge involves student accountability, which is considered in the chapter *Student Accountability in Online Team Projects*. As illustrated in the chapter, *Enhancing Student Learning Outcomes through the Integration of Team Projects into Instruction,* instructors will discover that collaborative learning arrangements are a powerful way to engage students in productive intellectual dialogue, provide opportunities for joint discovery and design, and support the development of teamwork and communication skills vital to today's graduate.

Collaborative learning groups. A collaborative learning group is a group of three-to-six students that is given an assignment or task to work on together. This assignment could be either to answer a question, create a group presentation or paper, or to complete a group project. As students begin group work, they should develop a team agreement in which they set the expectation for their collaboration including assigning themselves to roles such as leader, editor, note-taker, etc. These roles, whether permanent or alternating, and their team agreement will help students share in the effort and keep their projects on track. This process mimics the dynamics of work groups in real-world situations and will help students learn important skills like negotiation, accountability, time management, and conflict resolution. Such collaboration can be effectively applied in many settings from classrooms to corporate training: an example of which may be found in the chapter *A Collaborative Approach to Corporate Leadership Training*.

Student-to-Self Engagement

In developing courses, it is often easier to employ techniques that facilitate student-to-content and student-to-student engagement than it is to foster student-to-self engagement. Despite the challenges inherent in student-to-self engagement, this type of learning provides a foundation for self-awareness and authentic expression. Examples include visualization, social innovation, journaling, and reflective practice.

Visualization. To learn about visualization approaches, read the chapter *Visualization Techniques to Cultivate Data Literacy.* Through self-awareness and expression, students are able to shape and understand their educational experiences in ways that create greater meaning and deeper satisfaction.

Social innovation. Reflection also facilitates an awareness of beliefs and assumptions that enhance or limit one's learning and interactions with others. Understanding one's own and other's philosophical orientations utilizes reflection, questioning, and expression. See discussions on social innovation and pedagogy in the following two chapters: *A Kaleidoscope of Learning: Improving Student Engagement through Social Innovation* and *Ubiquitous Knowledge is Changing Our Pedagogy*.

Journaling and reflective practice. Other powerful examples of student-to-self engagement involve understanding one's own culture, history, and unique viewpoints. Journaling is a technique used in education to facilitate reflection, deepen students' understanding, and stimulate critical thinking. Journaling provides a channel of inner communication that connects beliefs, feelings, and actions, which allows students to develop their knowledge and understanding of course content as well as self-discovery. Learning journals are a specific type of journal that the learner writes to record the progress of their learning. Students may keep a learning journal for an individual course they are taking or for work across multiple courses. In utilizing journals for student-to-self engagement, awareness of cultural differences and how these impact learning experiences should be considered. For an in-depth analysis of this topic please see the chapter *Developing Reflective Practice and Trans-disciplinary Knowledge in a Cross cultural Learning Environment Using CAPSIM*.

Conclusion

The increasing popularity of online and hybrid courses present unique challenges and opportunities for engagement. Educators are compelled to find new, relevant strategies to engage today's learner in these evolving instructional formats. The framework presented herein helps in conceptualizing student engagement in new ways (student-to-content, student-to-student, and student-to-self). The chapters that follow promise to inspire and provide guidance and support for the implementation of a variety of engagements to enhance students' learning and satisfaction.

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Part I

Student-to-Content Engagement

1

Effective Course Design for Student Success

Kristin A. Jones

Abstract

Higher education has endured great changes since the turn of the 21st century, including changes in expectations for curriculum design, implementation, course delivery, and student experience. The emphasis is no longer on acquiring credentials until the minimum requirement is met; the emphasis is now on evidence of student learning and achievement of industry-specific outcomes. For this, many institutions are developing new innovative programs in a format that shifts the emphasis from what is being taught to what is actually learned. Students are provided with outcomes they must meet rather than inputs they will receive. This chapter will focus on how to write effective competencies and outcomes to ensure students have a clear understanding of what they must demonstrate to gain the credentials and degrees they seek.

Effective Course Design for Student Success

Higher education has endured great changes over since the turn of the 21st century, including changes in expectations for curriculum design, implementation, course delivery, and student experience. Emphasis on degree attainment has shifted from just obtaining credentials. As James Merisotis from the Lumina Foundation stated, "What students need and what our global economy and democratic society increasingly demand-is the learning those credentials signify, the highly developed knowledge and skills that postsecondary education provides" (Adelman, Ewell, Gaston, & Geary-Schneider, 2014, p. 2). No longer is the emphasis on simply counting credentials until students meet the minimum requirements. The emphasis now is on the credentials themselves.

To keep with these changes, colleges and universities are shifting from a more traditional instructor-centric to a more student-centric format, which emphasizes the demonstration of learning, not simply the completion of hours. For this, many institutions are developing new, innovative programs in a format that shifts the emphasis from what is being taught to what is actually learned. There is an emerging practice of delivering content through modes such as Competency-based Education (CBE), which emphasizes the student-centric approach and focuses on individual demonstration of competence.

There are three main facets of CBE: knowledge, skills, and performance. In many programs, knowledge is emphasized while skills and performance are less emphasized. Yet, skills and performance are essential for workforce readiness, and intentionally including these components in CBE is essential to applying new knowledge. This chapter will include a discussion on all three facets as equally important. In addition, suggestions will be shared for designing high quality competencies, ensuring that all three facets are included. A brief overview is included on how to write quality competencies and map these competencies to program learning outcomes for optimal program progression, increasing student success.

Well-crafted competencies are designed with the end in mind. The competencies clearly state what proficiencies students need to demonstrate to show that they have met the standards. Reciting information and knowledge as a performance measure is becoming less accepted in academic and industry circles. Employers are looking for individuals who can succeed in the modern and global workforce; who can take the learning they have acquired and successfully transfer it to a workforce setting; and who can implement their learning into new situations outside of a classroom setting. Well-written competencies use active language; describe the knowledge and skills that must be applied; include clear performance criteria; and allow for personalization and direct implementation outside the classroom setting.

Competencies that incorporate all three facets – knowledge, skills, and performance – ensure that students have what they need to be successful in the workforce. It is important that all development in CBE ensures each of these facets is represented throughout the program and competencies set for each facet build upon each other to ensure continual development of learning towards the standard set. Graphic 1 gives examples of each facet and the importance of all three working together in a learner's development.

Graphic 1:

Three Facets of CBEs: Knowledge, Skills, and Performance

Knowledge	**Skills**	**Performance**
Vocabulary Theories Historical information	Synthesize research Determine best practices Develop plan of action Research-based support	Implement new learning Gather data on effectiveness Analyze results Reflect on process Determine next steps
Demonstration	**Demonstration**	**Demonstration**
Test method Written paper	Research reports Videos Lesson plans Portfolio of artifacts	Videos Presentations Student work samples Portfolios Leading on-site trainings

Well-written competencies that include active verbs support student success. One valuable resource to have on hand is a copy of *Bloom's Taxonomy*, *Bloom's Revised Taxonomy*, or, if in an online program, *Bloom's Digital Taxonomy* (Churches, 2009). Simply put, "You cannot understand a concept if you do not first remember it, similarly you cannot apply knowledge and concepts if you do not understand them. It's a continuum from lower order thinking skills (LOTS) to higher order thinking skills (HOTS)" (Churches, 2009, para. 8). Students must develop learning through the process of developing higher order skills that build from the lower order knowledge.

When writing competencies, instructors can align these towards the appropriate level of Bloom's for the standard the student must meet. If there is a knowledge component, the instructor can use one of the lower levels like knowledge, remembering, understanding, and comprehension. As learning progresses, so should the level of demonstration. Well-designed competencies focus on higher levels of the framework. While the lower levels are vital for the process of building knowledge and skills, it is the higher levels which they demonstrate mastery in applying the knowledge and skills. This application of learning is the essential element to ensure workforce readiness.

For a full list of active verbs to help with developing competencies, one can search Bloom's on the web and locate numerous resources. Finding the list that is best for one's program is invaluable for developing effective competencies that logically build to program outcomes. Regardless of which version of Bloom's one uses, starting with an active verb is the key element to each competency. Some possibilities are included in Graphic 2.

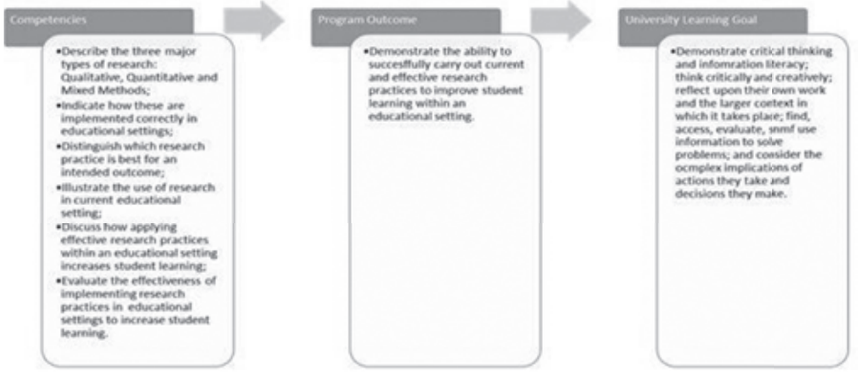
Graphic 2

Sample Active Verbs for Bloom's Taxonomy Levels

Remembering	Understanding	Applying	Analyzing	Evaluating	Creating
LOTS	→	→	→	→	HOTS
Relate	Summarize	Complete	Contrast	Justify	Plan
Describe	Paraphrase	Implement	Examine	Assess	Invent
List	Explain	Examine	Explain	Prioritize	Compose
Name	Discuss	Illustrate	Identify	Recommend	Design
Define	Compare	Classify	Categorize	Rate	Construct

Program outcomes are larger learning statements that indicate what the student must demonstrate upon completion of the program. Having clear and direct outcomes is just as viable as competencies in ensuring student success. Table 3 maps a series of competencies that aligns with a program outcome and a university learning goal. In this map we see how the competencies all start with active verbs and clearly indicate what the student must demonstrate to meet the program outcome. We also see the clear alignment from competencies to program outcome to, in this case, a university learning goal, providing a clear and well supported structure for the student.

Graphic 3:



Conclusion

Twenty-first century learning impels great shifts for higher education and students earning degrees within it. Instructors are now asking, "What will my students demonstrate?" rather than "What will I teach?" when developing content for learning. The use of competencies switches the emphasis from memorization of content to implementation of learning in a new setting. This implementation piece is key to preparing workforce-ready individuals who must thrive in corporations that are more dynamic and global than ever before. Completing a program that uses a map to

align competencies with learning outcomes enables students to develop learning paths that best fit their needs, all while ensuring they are developing the knowledge and skills necessary for workforce readiness.

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2

Using Video to Connect Learners in the Online Course

Ceradwen Bacon, Matt Lechner, and Al Ybarra

Abstract

One potential drawback to online learning is that geographically dispersed students can feel isolated, leading to negative emotions such as anxiety and frustration (Rovai, 2007; McInnerney & Roberts, 2004; Palloff & Pratt, 1999). However, faculty can create an environment of personal connection and support simply by using communication channels in which students can hear and see their instructor and fellow students. Research shows that incorporating video into the online classroom contributes to students' more positive feelings about the learning experience (Whipp & Lorentz, 2009). City University of Seattle's academic technology support staff encourages instructors to add multimedia to their online courses as a way of reaching their students more directly. The support staff recommends several specific methods, including recording lectures and allowing students to record their own presentations, creating short announcement videos, and hosting web conferencing sessions. This chapter

will outline these practices – as well as look to future best practices – and present easy ways for instructors to use video in the online classroom to increase student engagement and success.

Using Video to Connect Learners in the Online Course

In the mid-twentieth century, the prevailing concept of learning in the United States emphasized repeated practice of isolated facts, concepts, and theories (Skinner, 1968; Bloom, 1971). Over time, the controlled environments and modeled processes of demonstration and repetition began to be criticized as inadequate education, and in response, new standards were developed that stressed deeper understanding of concepts and the relationships across subject areas to connect learning with personal experience and authentic contexts (Resnick, 1987). More recently, educational practices are again being upended by the explosion of online education, from K-12 through doctoral studies.

While online learning has many advantages, one potential drawback is that personal connections can suffer at the expense of isolated facts and concepts (McInnerney & Roberts, 2004). Research shows that students in online courses often feel isolated, causing anxiety and other negative emotions about the course, the content, and the instructors (Rovai, 2007; McInnerney & Roberts, 2004; Palloff & Pratt, 1999). To maximize student engagement, instructors can find ways to combat student isolation and negative feelings about the course. Fortunately, there are helpful tools and strategies to reduce students' feelings of isolation by increasing the social presence of the faculty and fellow students (Rovai, 2007; McInnerney & Roberts, 2004; Wei, Chen, & Kinshuk, 2012).

Social presence in distance learning is a prime indicator for student satisfaction and perceived academic outcomes (Gunawardena & Zittle, 1997; Weinel Bannert, Zumbach, Hoppe, & Malzahn, 2011; Whipp & Lorentz, 2009). By adding video to online courses, thus allowing students to hear and see their instructor and fellow learners, the instructor creates an environment where the student feels connection to both faculty and peers and contributes to students' increased learning and positive feelings about the course. This chapter presents several techniques and best practices for achieving these goals.

Video Technologies

Along with the rise of online learning, new video technologies emerged that have streamlined the processes of media creation and distribution at low cost. YouTube now tallies over 300 hours of video uploaded every minute by over one billion members (YouTube, n.d.). Equally intriguing is that mobile devices count for half of all media viewed on their service, suggesting that the portability of media assets is accelerating. Capturing, editing, and distributing video content is now in the hands of millions of people, marking the shift from media literacy to media fluency.

This comparative ease of video creation (rather than only consumption) greatly benefits instructors and students in higher education at the very moment when it is most needed. At City University of Seattle, many instructors have found that recording lectures and posting them in their online courses requires virtually no expertise in managing, editing, or publishing video files; instead, their efforts are simply focused on creating video content for their students to watch (and re-watch, if necessary) at their convenience. Adding "lecture capture" technology—that is, simultaneously recording the instructor's voice, video image, and computer desktop—allows instructors to demonstrate key concepts or review upcoming assignments in addition to recording traditional lectures. Furthermore, students can take advantage of the same lecture capture software to record presentations of their own, so it is not only the instructor who becomes more "real" to them but also their classmates. Seeing others present their work increases the students' sense of connection with peers because it is not only academic content but also social presence being shared.

Example Strategies for Using Video

An instructor in the City University of Seattle School of Management, for example, uses lecture capture to narrate key accounting practices as he shows his work in spreadsheets on camera. Because the instructor is talking through each problem, the concepts become more tangible than the static examples in the textbook. Research indicates that students respond better to instruction when they feel they are spoken to directly, particularly in a conversational rather than a formal style (Smith & Smith, 2012), and the accounting professor exemplifies this practice even in the online

environment. In his videos, his students see both his personality and his passion for teaching. Lecture capture thus achieves two important goals: it has been consistently shown to raise test scores (Sloan & Lewis, 2014; Terry, Macy, Clark, & Sanders, 2015), while at the same time it increases awareness of the instructor as a supportive leader committed to the students' success.

Another way to add video to the online course to enhance student learning and engagement is for instructors to record themselves in environments other than the classroom. Lauren Resnick contended that out-of-school thinking engages the physical world more than in-school thinking: "Outside school, actions are intimately connected with objects and events…. School learning, by contrast, is mostly symbol-based… connections to the events and objects symbolized are often lost" (Resnick, 1987, p. 14). Thus, it is important to extend the classroom experience beyond traditional physical environments (Witfelt, 2000). Fortunately, video technologies have the potential to do just that, by capturing real-world events and situations for application to in-class education.

An instructor in the City University of Seattle Albright School of Education, acknowledging this, uses videos to connect with her students through weekly "check in" videos. In these videos, she films herself presenting information pertinent to that week of the course, including feedback on the previous week's work, what they will be covering during the upcoming week, and topics and ideas she would like students to focus on and consider throughout the course. On camera, she is able to compress a lot of information into personable and easy-to-digest segments. Students require much less clarification and take in her words more naturally than if she had typed them out as a course announcement or email.

Discussion on Using Video in the Online Classroom

Research supports this idea that text-based communications lack the information-rich social cues that come with hearing a voice and seeing a face and thus are prone to misinterpretation (Curtis & Lawson, 1999). Using only text-based teaching techniques greatly limits the ways instructors can reach their students, particularly in the online class. In the education instructor's videos, she is communicating more than just words. She is turning weekly announcements into a social communication, as her students can see and hear her talk. By contributing to her social presence online, she appears more approachable and makes her students feel more connected to her. She is also communicating through her appearance and demeanor: by dressing and speaking professionally, she is modeling behaviors she would like to impart to her students. Such modeling is very difficult to teach through text alone. Thus, this instructor successfully uses video to create different types of learning opportunities as well as to reach students with a wider variety of learning styles, while at the same time showing her personality and caring for the students.

Very little is needed in the way of specialized video equipment to create the types of videos discussed above. Lecture capture software requires a webcam, either built into the instructor's laptop or connected via USB to their PC. Creating videos like our education instructor's video does require a video camera, but many still-image cameras can record video, as well as most smartphones and tablets. Academic technology support staff offer both instructors and students guidance and support in creating video content, from selecting the appropriate software for a specific project to demonstrating video editing and publishing options.

To maximize success, instructors can start with a small project before committing to a multi-part series or high-stakes event. Simply taking the first step and posting a short video for students starts to generate social presence and awareness in the online class. If an instructor has created several videos, it can be most effective to require students to watch the first video early in the quarter to establish the value of the videos. This practice has been shown to increase students' voluntary consumption of video content later in the course (Sloan & Lewis, 2014).

Future applications of video in online courses can include wider adoption of short videos embedded in context within the online course. For example, a small thumbnail of instructor video can be inserted in any otherwise text-based announcement, introduction, or assignment—no separate "Videos" section is needed. Another important future application is video feedback on course assignments. Students absorb both positive and negative feedback more effectively when they hear it directly from their instructor than when they skim text comments attached to their assignments and papers (Jones, Georghiades, & Gunson, 2012). In addition, Jones, Georghiades, and Gunson found that instructors' comments are perceived as more personalized on video, and students better understand their strengths as well as areas to focus on in the future.

Conclusion

The increasing ease of creating videos dovetails with an increasing need (and expectation) on the part of students in online courses for personal connection, social engagement, and shared experience with their instructors and classmates. Educational practices have been disrupted in the past by new understanding of human behavior and learning, and the rapid expansion of online education has stimulated similar upheaval, development, and adaptation. To take advantage of online education's great strengths, its potential pitfalls must be addressed. Minimizing students' feelings of isolation and anxiety by promoting social presence and personalization requires new instructional tools in the online environment. Adding video allows instructors to speak directly to students—and allows students to speak to one another—to increase positive feelings about the course and to promote deeper engagement.

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3

Modus Mashup and the "Dungeon Master": Integration of Medias and Activities that Simulate and Stimulate in the E-classroom

Vincenzo A. Sainato

Abstract

Online environments create opportunities for unique and transformative learning methods; however, it takes creativity, time, and a willingness to give students a level of control to maximize learning and student productivity. Too often, various technologies and approaches are used in isolation; however, through "mash-ups," experiences and environments that

facilitate teamwork, collaboration, and retention can be integrated. This chapter illustrates an experiment in using discussion forums as a means of creating a round-based, table-top simulation where the students role played and used simulation techniques simultaneously. This chapter will discuss what worked, what didn't, and ideas for overcoming challenges.

Integration of Medias and Activities that Simulate and Stimulate in the E-classroom

The purpose of this chapter is to illustrate the results of an experiment in online learning that integrated different modes of conveying information and stimulating interaction and learning. Over a three-week period, 13 students and three faculty members participated in a multi-round criminal investigation simulation (or game) that yielded 750 unique interactions (or posts) in a series of discussion board forums. The quality, volume, and intensity of the interactions far exceeded expectations and yielded unexpected insights on creatively combining different learning objects and techniques to simulate scenario-based, critical thinking exercises that put the students at the center of the activity.

Educators can utilize basic tools that are core to any Learning Management System [LMS] (i.e., Blackboard) and create activities that simulate and stimulate in the e-classroom. In addition to illustrating the promise of what is possible, certain pitfalls and ideas for how this approach can be incorporated into different kind of courses are discussed.

Methodologies

Arguments have been presented that e-learning is, essentially, a correspondence course rendered and facilitated with a computer (Feenberg, 2011; Valentine, 2002). Those who seriously explore the possibilities of e-learning know that, in many ways, these are the early pioneering days of developing "universal" stratagems for learning. As one approach gains traction there are changes in technologies and economies of scale that give birth to newer ideas and approaches; nonetheless, e-learning environments allow a variety of novel educator-to-learner and learner-to-learner interactions that are not easily achieved in a standard classroom.

Of late, the "new" new thing concerns flipped classrooms - environments that put the students as individuals at the center of the learning process (Gabriel, 2011; Goodwin & Miller, 2013). As Hallberg (2010) explained, student centric design is not a new idea and shows that traditional approaches can be student centered. Hallberg argued that this is true with natural science and courses couched in quantitative methods (i.e., statistics). The flipped concept can take many forms and involve single mode or multi-modal learning environments.

While the practice of flipping classrooms, facilitated by a variety of learning objects and activities, has been increasing, there is no consensus on which approach works best (Bishop & Verleger, 2013). Limited research exists, though some experiments and pilot studies have shown promise; for example, Greenberg, Medlock, and Stephens (2011) found a statistically significant increase in assessed outcomes when students had input and a level of control over the content or pace of the instruction in a flipped environment.

Another promising approach involves the use of simulations or turn-based tabletop exercises (or games). These are facilitated exercises involving a case or situation in an "informal, stress-free environment… designed to elicit constructive discussion as participants examine and resolve problems" (EPA, 2000, para. 1). Typically, these exercises involve several rounds where a facilitator will use the decisions and interactions by participants to evolve the narrative in each round. Through this process, participants see causal and corollary impacts of their decision and responses, thereby yielding a simulated hands-on experience in an antiseptic environment. This approach is commonly used in a variety of fields including medicine, emergency management, and business (EPA, 2000).

Arguably, the concept of turn-based, critical thinking exercises could apply to virtually any field; moreover, despite the potential for games to be powerful and enriching experiences for learners, researchers have found a certain reticence among educators (Metcalf, Kamarainen, Grotzer, & Dede, 2013); concerns include instructional effectiveness, technology, and time (Jones & Warren, 2011). Metcalf, Kamarainen, Grotzer, and Dede (2013) explained that simulations in e-learning have frequently involved expensive and customized self-encapsulated virtual environments that include three-dimensional worlds that are not easily repurposed for other cases or simulations.

This last point is instructive because it gets at the heart of the classroom experiment described below. Could a creative mix or "mashup" of learning objects and content be inexpensively brought together using the

standard tools of a LMS and still maintain the integrity and quality one would expect in a customized solution?

The Classroom Experiment

A classroom experiment to assess the efficacy and viability of conducting a turn-based simulation in an online class was undertaken. The weekly chain of events were as follows:

Week 1. The students were given a detailed and complex, but plausible, fact pattern for a serious crime involving sexual violence. The fact pattern was supported by custom-created video podcasts, crime scene photos from a similar crime, and relevant YouTube.com videos. The students were then directed to use the discussion board to post an initial response to the fact pattern - as the lead detective what would their next step be, given the fact pattern and the concepts that they had learned in the course to date. Throughout the week's discussion the lead professor in the class interacted with the students in the discussion board. The first week was used to assess if the students could interact appropriately with the scenario and determine whether or not we could, and should, move forward.

Week 2. Based on the responses and comments in week 1, the fact pattern was given important adjustments to improve the flow of the exchanges and in light of comments made by students within the first week's thread. Those changes and a prompt were placed into a new discussion board forum with a thread labeled "Part 2…" of the investigation; On Wednesday the students were to post their initial response to the "Part 2…." thread. Within the thread the students could *not* see other students' posts *until* the "sheriff" and the "district attorney" responded to each student. The students were not permitted to make any other comments in "Part 2…," and the thread was locked by making it "read only."

On Thursday, the facilitator opened a new thread, "Stage 3…," that took specific inputs from the "investigators" and responses by the "sheriff" and "DA" and evolved the storyline of the scenario. This thread had a prompt for the student but, unlike "Part 2…," was an open forum for discussion and debate, which included the "sheriff" and the "facilitator" engaging with the "investigators." The debates and exchanges were lively, but professional, in tone as all participants debated the merits of the evidence and procedural issues involved. This debate continued over two days, and, when the "facilitator" believed that a critical mass of analysis had been reached on Saturday evening, the thread was locked, made read-only, and a third thread was opened-up. As with the previous threads, the new one took specific interactions and comments from the previous threads and used those evolve the story. This final thread, "Cell phone intel." was an open discussion.

Week 3. At the beginning of the week, the complete picture of what really occurred in the case was revealed. This was a narrative that filled in the missing pieces but was designed to explicitly incorporate the findings and results of the efforts by the "investigators" in week 2 and the feedback provided. A post-simulation reflection exercise was rendered in the form of a discussion forum. Each student was invited to reflect on the narrative and the process of how the simulation was run.

Results and Key Areas of Improvement

One metric for success is the amount of individual interactions, or posts, within the discussion board - as that is where the activity of the game occurred. Over the entirety of the game, 13 students and three faculty members had 750 unique interactions as shown in Table 1.

Table 1:

Unique Interactions, Organized by Week and Individual Forum

Week	Title	Unique interactions
1	Initial investigation	493
2	Investigation, part 2: "Accuser goes to the press"	28
2	Stage 3 of investigation: New intel?	114
2	Cell phone intel	29
3	Post simulation	59

Viewed from this vantage point the exercise was successful; however quantity of posts does not necessarily equate to quality. Qualitatively, the students' interactions were at the level appropriate for the exercise. The students challenged each other and several of them developed insights through their "investigation" that changed the outcome of the case.

The feedback in the post-simulation exercise was generally favorable about this approach to learning. One student stated, "I think if anyone strongly dislikes it perhaps it is because it made them really think in an engaging way? :)." Some students pointed to the integration of medias and interactions that changed with their inputs as getting them "excited" about "what would happen next [in the game];" however, the praise was not universal. Participants identified a number of key areas for improvement with respect to the process and timing and organization of the game itself. This critical feedback is subsumed in the analysis below.

Role Clarity

In this exercise, there were too many leaders involved.

For future exercises an avatar will be created, "Dungeon Master," which is a reference to the "facilitator" in the role-playing game, *Dungeons & Dragons*. This avatar is intended to only be used in future game exercises and would create a clear distinction from the roles that have direct interactions with the participants (i.e., the professor playing the role of the "sheriff").

Future exercises will include, as part of the directions, clearer directions on each participant's role in the exercise along with a bio; this includes identifying the "Dungeon Master" as an objective third party whose role is to change the parameters from round to round.

Timing and Process

Timing of new round origination created challenges for some - when each subsequent round, especially in week 2, was not pre-determined. Feedback from students included: "…messes with my schedule...For those of you that are in the criminal justice program (just my opinion), this probably was very helpful, but this is a science credit for me in the project management program (BS)...and was, it was another revision to the schedule... I work, have a family, (1 husband, 2 boys in sports, 2 cats, 3 dogs, a rental house etc.) and need to live by a schedule… have been at times confusing." The faculty would make the new round available when they felt a "critical mass" of discussion had been reached in the previous round. The unpredictability created confusion and resulted in some students missing out on key information that had become buried in the discussion.

To solve this challenge with timing and process, the facilitator can specify windows of time for each round and explicitly state the responsibilities of all participants within each round.

Discussion Board Thread/Forum Organization

In the first round, week 1, the instructor created a discussion board forum where each student created a thread as an initial response to the prompt. Participants would go into each unique thread to engage with each other. Feedback from students included: "While I am a full time student I do also work 2 jobs and try to maintain somewhat of a personal life… *having to go through hundreds of posts over multiple threads was not my idea of fun* and became a little frustrating towards the end" [emphasis added]. This resulted in a level of redundancy that would not normally occur in a single open thread; moreover, as students realized the redundancy they stopped posting within each thread and concentrated their communications in just a few. In other words, they would stop communicating about a subject in thread 1 and organically move the conversation to another thread. This "clustering effect" (as illustrated in Table 2) made following the conversations a challenge.

Table 2:

Illustrating the Scale of the 'Clustering Effect' in the First Round

Thread initiated by:	Total posts per thread
Student A	9
Student B	18

Student C	56
Student D	20
Student E	10
Student F	107
Student G	28
Student H	171
Student I	19
Student J	53
Student K	1
Student L	1

In the following rounds, this was corrected by using a single thread for each round; however, this was not systematically managed as there were inconsistencies with labeling of the threads ("rounds" versus "stages"). Another problem concerned the within-thread organization. In round 2 (thread "Part 2") students each had a post that was responded to by the "sheriff" and the "district attorney." In round three ("Stage 3") the thread was treated as an open forum with both the "sheriff" and the "facilitator" both playing active roles in responding to students. Thus important exchanges and developments in the fact pattern were not clear to students.

To solve this challenge, instructors can set participant expectations with explicit directions, in advance, for how the discussion boards will be used, including consistent labeling and nomenclature.

Make a Script, then Deviate from it

Other than the first round and initial evidence, the remaining rounds were unscripted. This meant that the instructors were spending a lot of time during the exercise trying to figure out "what's next" (for the following round) and how to change the parameters that took into account the findings and interactions of the participants within the previous round.

To solve this challenge, instructors can create a detailed script for the initial, and subsequent rounds. Instructors should be as specific and creative as the scenario warrants, but be prepared for the participants to engage with the material in a way that allows for changes to the scenario accordingly. Instructors are encouraged to be creative, and anticipate what additional evidence or artifacts might be necessary beyond the first round, and have those ready to deploy as warranted.

Discussion

The exercise detailed herein was not designed to be a formal experiment with control groups and all of the proper trappings of empirical research. Rather, it began as a challenge to the faculty to use the resources that already exist within the e-learning environment to engage the learners in a manner that involved relevant subject matter, critical thinking, and active participation.

Some might argue that conducting a scenario that involved a criminal case made things easier in some way and that this could not be replicated in courses that involved less exciting subject matter or that students would be less inclined to be as participatory in a course on accounting or educating special-needs children.

What made this effort successful, to the degree that it was, was the tangible 'power' and 'control' given to the learner. The learners probed, explored, and debated decisions on what should be done next, and saw the results of those proposed choices in subsequent rounds. Whether or not that is true is an empirical question that future research should be designed to probe. However, what can make this kind of exercise in an e-classroom effective is no different than why it is an effective tool for practitioners when conducted in the context of a table-top exercise: The environment and game approach is inherently designed to probe decisions made in particular scenarios, the consequences, and subsequent decisions and their consequences. When viewed in this way one can imagine the possibilities, especially in courses where the subject matter is overtly oriented towards praxis, such as educating special needs children, accounting, or criminal investigation.

Another thought that some might have is that the approach relied on the use of learning objects (video podcasts) that require technical knowledge or access to specialized equipment or software that many educators do not have. That is a reasonable point but not an obstacle that is terminal, as one is only limited by creativity. Perhaps one approach is for an educator to consider a scenario from their own experience and turn that into a narrative with "breaking points" for decision-making and debate. Or,

another approach could be to take a video from YouTube that is relevant and game the subsequent decisions or add a narrative to that video in some way and then game the combination. Every e-learning environment has a discussion board mechanism; moreover, that is the key touch point, as this is where the prime interactions take place. There are countless combinations that one can draw upon to create a useful narrative. The best approaches and combinations, and under what circumstances they work best, are still an 'undiscovered country'.

In addition to the points made above, future research should explore the efficacy of having multiple instructors participate in different roles. Also, another pathway worth exploring is a scenario where the learners play different roles.

Conclusion

Integrating different types of learning objects and artifacts into an environment where students go beyond receiving information and, in fact, contribute to a community of discovery through stimulation and simulation is a valuable structure to enhance student learning. Questions should be asked and concepts explored as to what different techniques and learning objects will yield the greatest efficacy, depending on the discipline.

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4

Who Am I Online? Cultivating Students' Digital Identity Practices

Tammy B. Salman

Abstract

Citizenship, or the participation and engagement of individuals within communities, is a cornerstone of democratic society. In the 21st century, increasing access to, and the proliferation of, digital tools has allowed new forms of social, political, cultural, and global connectivity. This connectedness has given rise to new forms of community discourse, often defined collectively as digital citizenship. Discussions about digital citizenship are more prevalent in elementary and secondary classrooms, often emphasizing safety and privacy, but are no less important in higher education. Because digital citizenship is a broad topic, this chapter will emphasize a facet relevant to higher education: digital identity. It will explore strategies for using digital tools to encourage higher education students to

contribute as digital citizens in their chosen professional fields. College, university, and other adult-learning educators are in a position to help students – whether digital natives or digital immigrants—understand and cultivate a digital professional identity.

Digital Citizenship

"Modern technology has become like a phantom limb, it is so much a part of us."
–Sherry Turkle, TEDxUIUC 2011

Citizenship is a founding principle of democratic societies. While citizenship is defined within a variety of contexts, it generally involves the rights and responsibilities people have with regard to participation or engagement in cultural, social, regional, national, or global communities. In the 21st century, civic participation and engagement includes a digital dimension, often referred to as digital citizenship. Digital citizenship is defined broadly as the appropriate use of technology and the set of related behaviors associated with working and participating in a digital society (Ribble, 2011). It is an evolving concept that blends a traditional understanding of what it means to be an engaged citizen with new methods for societal collaboration and participation.

Digital citizenship is often discussed in elementary and secondary education, with an emphasis on children's safety and security, but educators at colleges and universities have the opportunity to continue the conversation by connecting digital citizenship practices to career or professional pathways.

While digital citizenship is a broad topic, this chapter is more narrowly focused on a facet of digital citizenship: digital identity. As employers increasingly look for workers who have the ability to think critically, solve complex problems, and understand how to participate in a globally-connected environment, college and university educators are in a position to imbue students with a sense of social responsibility regarding ethical practices and service by encouraging them to cultivate professionally appropriate digital identities.

Employers Consider Digital Identity in the Hiring Process

Employers and recruiters increasingly use social media, such as LinkedIn, and search engines, such as Google, to learn more about job seekers and to eliminate potential candidates based on posted information that might be deemed inappropriate. In a poll conducted by Harris Poll on behalf of CareerBuilder (2014), 43% of hiring managers and human resource workers surveyed said they search for information and photos posted by job seekers, and 51% of those employers who look for additional information reported not hiring based on content candidates posted. Among the reasons employers reported for eliminating candidates were posting indecent photos, indications of drug or alcohol use, and negative comments about previous employers (CareerBuilder, 2014).

Leverage the Social Media Platforms Students Already Use

Adults across generations are more digitally present, contributing content, opinions, images, videos, and more across multiple online platforms and social media (Duggan, Ellison, Lampe, Lenhart, & Madden, 2015). Because of this, higher education should embrace digital forums and social media as means for cultivating students' awareness of, and contributions to, digital social discourse. Leveraging social media in conjunction with the classroom experience (in person or online) helps to set expectations for participating and contributing in meaningful ways. If critical thinking, communication, and problem-solving are among the top skills sought by employers, in what ways can educators help students develop awareness of what digital participation means and help them develop a digital identity to demonstrate key skills?

Cultivating a professional digital identity with the support of educators who are practitioners and experts in their fields is a way to build confidence and expertise, as well as to shift from awareness of social media to knowledge of social media to "social media intelligence," which Lyle

Wetsch, a marketing professor and globally recognized social media expert, deems the pinnacle of comprehension of what social media is and how it can be effectively leveraged by individuals (Wetsch, 2012, p. 31).

Online Reputation Matters in a Digitally Archived World

Online reputation management is an essential component of digital identity and online participation, because what someone says about himself or herself, and what others say, shows up in his or her online digital footprint. Because information and photos posted for a few minutes and deleted may still exist on servers or in archives such as the Internet Archive and may never truly disappear (Internet Archive, n.d.; LePore, 2015), there is a need for users of social media and devices such as tablets and smartphones to monitor online contributions. Reputation management includes having an understanding of what social media sites offer, using search engines to monitor identity, and understanding how privacy and location settings are used (Madden & Smith, 2010; Rainie, Kiesler, Kang, & Madden, 2013).

How Can Higher Education Encourage Students' Participation as Digital Citizens?

Current higher education classes, whether face-to-face or online, or a combination thereof, typically include some sort of online component. Educators can facilitate digital identity development by leveraging a variety of tools already used in the classroom or by students for personal reasons. What follows are some ideas educators should consider to encourage and model digital participation and digital identity development. There are unlimited ways of incorporating digital tools and social media into courses, particularly since digital tools and preferences are prone to change. However, these ideas and current practices may help spur creative curriculum connections.

Learning Management Systems and Digital Identity Creation

Colleges and universities which emphasize online education, or make heavy use of learning management systems (LMS) as a complement to their courses, are in a good position to model appropriate digital behaviors and integrate relevant activities or assignments into courses. The nature of online learning provides a structure for digital interactions and a safe environment in which students can develop or enhance their digital identities relative to educational pursuits. Faculty can model and encourage students to create robust profiles within their online course systems and within university-hosted portals and forums (Snart, 2010).

E-Portfolios as Springboards to Digital Engagement

Participation in digital communities can begin with students engaged in higher education and adult-learning programs. Faculty can help students understand the connections between learning outcomes, assignments, and their professional goals through focused use of tools such as e-portfolios. The concept of e-portfolios as a digital collection of student artifacts is not a new one in higher education. By using e-portfolios, particularly those that are available to the public via websites, blogs, or other tools, students can showcase their schoolwork, internships, and work experience, co-curricular, and extracurricular activities. E-portfolios can serve as an initial launch for students' professional identity (Graves & Epstein, 2011).

Colleges and universities are helping students develop more focused e-portfolios and making them accessible outside of closed university systems (as an example, see Virginia Tech University's Gallery of Presentations). Developing and showcasing e-portfolios using blogs or other publicly accessible tools and websites is a way to increase the visibility of students' work and provide students with a springboard from which they can continue to build their online presence as they acquire new skills, develop professionally, or change careers.

Microblogging, Pinning, and Shared Images: Digital Equivalents of the Elevator Speech

Businesses and career sites encourage job candidates to hone their "elevator speeches," or short statements that quickly sum up the kind of job they want or the jobs they perform. The concept is that you should be able to describe a function or skill concisely to a stakeholder in the time it takes to ride an elevator (Mind Tools, n.d.). In the digital world, this holds true as well, and there is no shortage of ways to quickly capture attention through use of short bursts of text, images, video, or a combination of these techniques.

According to the Pew Research Center's 2014 social media survey, Pinterest, Instagram, and Twitter ranked among the top social media sites after Facebook and LinkedIn (Duggan et al., 2015). Tools such as these make it easy to join conversations, collaborate, and hone visual and digital literacy skills, and they are good starting points for developing a digital identity.

Tweet it

According to Acosta (2014), higher education should play a larger role in incorporating instruction on the effective use of tools such as Twitter. Twitter offers a platform in which students can practice distilling their knowledge and ideas into short bursts of conversation in a digitally connected environment. In one example, researchers at Boise State University studied mobile microblogging as an authentic form of learning, using a mixed-methods approach to analyze tweets from students in a master-level instructional message design course (Hsu & Ching, 2012). Students applied learning theory and design principles to their Twitter messages and interacted with peers and others on a regular basis. The study reported benefits to students such as improved social learning and enhanced connections to course material in an authentic, real-life way.

Pin it

Electronic bulletin boards such as Pinterest allow users to post, or "pin," digital objects such as photos, videos, and other web content. It is a

social place in which to gather ideas about how to build or create and to share with those who have similar interests. In higher education courses, e-bulletin boards serve multiple purposes in terms of digital identity, because they allow students to curate visual and multimedia objects in an authentic environment, engage with peers in class and beyond, deepen understanding of a subject, and invest in their learning in ways not possible within the strictures of a class environment (Beebe, 2014).

Blog it

Sharing ideas, stories, research, and other content online through blogs is a fairly established practice in the digital world. There are many ways blogging can help develop digital identity. Students need not establish their own blogs, though some may already have blogs, or may prefer to use blogs as part of, or in lieu of, an e-portfolio. There are established blogs to which students can contribute knowledge, stories, and experiences. Examples include professional organizations, media sites, university news sites, research sites, affinity groups, and others. Over time, professionals who blog may develop deeper understanding, increased comfort level with digital contributions, new perspectives, and increased expertise (Luehmann, 2008).

Digital Identity and Personal Branding

Another method for facilitating students' digital identity includes guiding them through exercises in which they develop a personal brand with an eye toward career aspirations. Having a personal brand or identity, no matter where a student is in his or her career trajectory, is important for professional advancement (Wetsch, 2012). While the concept of branding is a term often associated with business and marketing, the idea is applicable across disciplines.

To bridge the gap between students' personal and professional identities in the online sphere, Memorial University of Newfoundland developed a course that guides students through development of their personal brand (Wetsch, 2012). Through the use of personality tests, worksheets, and self-reflection exercises, students identify their strengths and

weaknesses and begin to develop a unique professional identity. The course engages students in dialogue about tools, such as LinkedIn, which can deploy a personal brand, and assessment of a brand using the tools' embedded analytics (p. 34).

Conclusion

With the proliferation of digital tools, and use of social media across generations, educators in colleges, universities, and adult-learning settings are in a position to help students develop a professionally acceptable digital identity and make contributions as citizens in digitally connected democratic societies. Educators can achieve this by developing students' capacities to meet employers' needs, leveraging currently used social media platforms, learning management systems, e-portfolios, and other tools, and by promoting or modeling appropriate engagement through development of digital identity.

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5

Improving Student Engagement and Participation through Student-created Assessments

Arron Grow

Abstract

Typically, student assessments of learning based on course objectives are a standard part of teaching and learning in higher education. In most cases, course assessments are predetermined and prepared by faculty long before a class is offered and are the same for all students once a class begins. One practice that is not common in higher education is allowing students to determine for themselves how their assessments of course content are designed and reviewed. This chapter presents a case for student personalization

of assessments and a system for how this can be done to improve student engagement and learning in the higher education classroom.

Support for Student-created Assessments

Many research studies support the idea that increasing student engagement improves learning in higher education (Astin,1993; Kuh, 2003; Kuh, Kinzie, Schuh, & Whitt, 2005; Pascarella & Terenzini, 2005). Studies of international populations (Wawrzynski, Heck, & Remley, 2012) and those studying students with disabilities (Nichols & Quaye, 2009) find similar results. In short, the more engaged students are in their own higher education experiences, the more learning is likely to occur.

Allowing students to have a say in how their learning will be assessed has two clear benefits. One benefit of having students participate in the creation of their own assessments is that it enables them to create assessment experiences that are in line with their own learning preferences. Another benefit is that it allows students to demonstrate knowledge in ways that can showcase their individual strengths. Both of these activities integrate student voice more into the teaching and learning process, increase student engagement, and, in the process, improve student learning. What follows is a strategy that can be used to make this happen.

A Process for Implementing Student-created Assessments

A process for utilizing student-created assessments in higher education classes is suggested with the following thoughts in mind.

Be open-minded. According to Svinigki and McKeachie (2013), "What is important is learning, not teaching. Teaching effectiveness depends not just on what the teacher does, but on what the student does" (p. 5). This is a call for teachers to have an open mind. Too many instructors seem locked into specific systems, either those imposed by learning organizations or those of their own making. Consider instead the notion of challenging the process proposed by Kouzes and Posner (2012). Be willing to test this out; see personally if this helps students learn more.

Start small. For management reasons, it is recommended that students are given the opportunity to create their own assessment for only one section of a course and that all students create their own assessment from the same section of the course. This may seem contrary to the guidance provided in item one above. While it is suggested that one be willing to challenge the process, practitioners may want to stay within accepted norms for the majority of their work. Gradual change is typically received more easily than big changes all at the same time.

The following procedure is recommended for using student-created assessments.

Introduce the idea early. At the start of the course, introduce all proposed class assessments, including the assessment which has been set apart as the student-created assessment. At this earliest point in the course have students consider how they may want to demonstrate their knowledge in the content area to be covered later in the course.

Students propose idea. Later in the course, have students determine the specific method that they will use to demonstrate their knowledge and have them submit their proposed assessment plan. Consider the following to help students develop their assessment ideas: (a) Ensure that students understand the role of assessments in learning is to demonstrate their mastery of course content; (b) Remind students what the objectives are for the section of the course wherein they will create their own assessment; and (c) Explain how their goal is to create an assessment product that will demonstrate their mastery of the section objectives.

Students create grading rubric. Have students create a grading rubric for the assessment product they have in mind to create. Have students follow the grade rubric pattern presented in the course syllabus. Model rubrics should have the following recommended elements which can vary based on appropriateness for course and instructor preference:

(a) Creation of assessment product should take X number of hours (determined by instructor and announced to students).
(b) Four-to-five specific rubric criteria.

(c) Four levels of accomplishment for each rubric criteria (from no performance in given rubric element to exemplary performance in rubric element).
(d) Specific, measureable descriptions for each rubric element at each level of accomplishment.
(e) A specific number of total points for the assessment that is the same for all learners. The instructor informs students of the total number of points the rubric is to have. Students determine how this total number of points is to be divided up within the rubric they create.
(f) Students submit their proposed assessment idea and associated rubric for instructor review. The instructor reviews and returns proposals to students with comments for improvements if appropriate.
(g) Provide a set assessment for students who would rather be told what to do than exercise a creative side.

It is true that this strategy will necessitate extra steps in the educational process. Educators should be ready for this. This extra effort will increase personalization of the educational experience which, based on research already presented, will lead to more learning for students.

Applications of Student-created Assessments in the Classroom

Consider the following possibility for assessments submitted by students:

Course: Biology
Content Area: Kreb's Cycle
Learning Objective: Demonstrate understanding of the eight steps in the Kreb's Cycle process.
Prompt for Student-created Assessment: Provide a work product that displays your understanding of the Kreb's Cycle.
Proposals Received:

- Create a 10-minute video describing the Kreb's Cycle process.
- Be the interviewee in an interview about the Kreb's Cycle process (video or audio recording),
- Create a 2 x 3 foot poster that describes the Kreb's Cycle process which is suitable for long-term display in the classroom.
- Give a 10- to 15-minute presentation of the Kreb's Cycle to the class.

Here is another example of what students may do with a given assessment prompt:

Course: Literature
Content Area: The works of Edgar Allan Poe
Learning Objective: Analyze the themes of Poe's work for relevance in today's world.
Prompt for Student-created Assessment: Provide evidence that you know and can relate to others through a) the major themes of Poe's work and b) how his themes are relevant to people today.
Proposals Received:

- Create a narrated PowerPoint presentation that presents the themes of Poe's work and analyzes the themes of his work for relevance in today's world.
- Paint the wood fence along 24th and 25th on Vine Street with information about Poe's works and how they connect with today's society (The fence is mine so it's okay.).
- Give a 15- to 20-minute dramatization with fellow classmates during the student union sponsored brown-bag sessions on the topic of Poe's themes and the meanings we can get from them today.

Here is one more example of what students may do with a given assessment prompt:

Course: Marketing
Content Area: Identifying Target Market Population
Learning Objective: Analyze strategies for identifying and narrowing target market populations.
Prompt for Student-created Assessment: Provide evidence of your understanding of strategies for identifying and narrowing target market populations.

Proposals Received:

- Present a proposal to a company that describes how my firm would use multiple methods to help them define, refine, and connect with their most appropriate markets.
- Write a white paper that addresses a company that has been identified in the news as losing market share and provide an analyses of where and how they can find new market populations
- Present a 15-minute presentation to the class about how various social media can use forums to identify different target market populations for businesses.

Conclusion

The more learners are involved in determining how they will approach their own learning, the more engaged and productive their learning experience will be. Instructors who take advantage of this to increase student engagement and voice in their classes are likely to be surprised and impressed with the creativity students will demonstrate. This added creativity will widen the perspective of all students and even instructors to create more gratifying, memorable educational experiences for all involved.

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6

Pedagogical Strategies and Training to Avoid Plagiarism

Stephanie J. Brommer

Abstract

Plagiarism-detection tools provide valuable information to instructors and students by helping students reap the rewards that can be attained through the insights from comparisons with existing papers and resources. Training on how to read plagiarism-detection reports, as well as how to cite, quote, and paraphrase, is necessary to demystify the process for both faculty and students and to inculcate better writing skills and use of sources among students. Pedagogically, teaching strategies, particularly in the online arena, will enable students to engage with writing skills that will promote their own work while building on others' knowledge. Draft submissions of student papers to plagiarism-detection tools and faculty development of unique assessments that encourage synthesis and student interpretation are two key areas that help create a culture of learning and enhance student writing skill development.

Pedagogical Strategies and Training to Avoid Plagiarism

Integrity, ethics, and communication are essential ingredients in academia. Blended together, they form the coating surrounding the dissemination of ideas. Without these essential ingredients, ideas and words – the core – can be stolen and copied. Digital access to articles, texts, blogs, and a myriad of other sources is widespread. A majority of college presidents in a 2011 Pew research survey reported that plagiarism has increased since the turn of the 21st century, with the Internet and computers playing a key role (Parker, Lenhart, & Moore, 2011). A three-year survey of 63,700 undergraduate students in the United States and 9,250 U.S. graduate students showed that a third of undergraduates and a quarter of graduate students admitted to paraphrasing or copying a few sentences from both online and written sources without citing them (McCabe, 2005).

Plagiarism is a complex phenomenon, and studies have produced contradictory findings. For example, one recent study of university students showed that the threat of plagiarism-detection software did not reduce the amount of plagiarism (Youmans, 2011), while another study of university students found that awareness of the application of plagiarism-detection tools deterred plagiarism (Heckler, Rice, & Bryan, 2013). Use of plagiarism-detection software resulted in formative effects in other studies, as some students sought education on the issue and favored the tools for both education and detection (Dahl, 2007; Rolfe, 2011).

This presents educators with a quandary. Online access to material and digital-only documents are vital aspects of learning and teaching today. How do educators instill the integrity and ethics required for students to communicate their own ideas using support from previous research rather than copying someone else's work? What strategies can be used to create a culture of learning where integrity and ethics are valued?

Common reasons for plagiarism include ignorance, procrastination, access to papers for sale, cultural acceptance, and ease (Gibson, C. W. Blackwell, Greenwood, Mobley, & R. W. Blackwell, 2006; Rolfe, 2011). The City University of Seattle Scholastic Honesty Board (SHB) has witnessed all of these reasons in hearings of scholastic dishonesty allegations. The Youmans (2011) and Heckler, Rice, and Bryan (2013) studies reflected many of these motives.

Reframing plagiarism-detection tools as learning and self-assessment tools leads to the following strategies that also address common reasons for plagiarism:

- create a culture of learning and collaboration among faculty and students;
- apply plagiarism-detection reports, through draft submissions, to develop students' skills in paraphrasing, quoting, and citing;
- train both faculty and students on how to read plagiarism-detection reports;
- design unique assessments that include experiential work and synthesis; and
- approach the university scholastic honesty committee as a forum to provide valuable teaching opportunities.

Create a Culture of Learning and Collaboration

Erosion of ethics, ignorance, or uncertainty of what scholastic dishonesty constitutes, academic competition for grades, and lack of consequences are among the rationales for student plagiarism (Klein, 2011; Megehee & Spake, 2008). A culture of learning and collaboration that focuses on educating students about plagiarism and ethics and working with students on research and writing skills requires transparency regarding the use of plagiarism-detection services and faculty involvement. "Somewhat surprisingly, the blame for a culture of cheating is often put on the faculty and administration by the student body" (Gibson et al., 2006, p. 39). Hands-on faculty involvement, availability of learning resources, and strong ethical and moral stances against academic dishonesty through policies, discussions, and sanctions are strategies that promote scholastic honesty. Peer attitudes as well have been found to be important in creating a learning community that discredits and discourages academic dishonesty (Novotney, 2011). When a small group of students was introduced to Turnitin.com in 2007, the professor found that students were generally positive about its use, but those students who were insecure about how to correctly quote and cite were less positive (Dahl, 2007).

Develop Students' Skills

Requiring students to submit their drafts to plagiarism-detection tools creates an opportunity for instructors to show students where, how, and why they need to put quotation marks around a passage or include an in-text citation for paraphrased information. This makes the plagiarism-detection report a tool for learning, rather than for punishment, as well as increases the collaboration between faculty and students. While a strategy is to use plagiarism-detection software as "a learning tool rather than policing tool," having faculty engage with students in the writing process can contribute to reducing plagiarism (Delcoure & George, 2012, pp. 6-7). Faculty can use draft plagiarism-detection reports to show students how they effectively or inadequately drew from and synthesized texts while having acknowledged the work of others. A study of feedback through plagiarism-detection reports found that most students believed that it helped them improve their writing, but it did not improve citation skills (Rolfe, 2011).

After assessing student skills in paraphrasing, quoting, and citing through the draft reports, online modules and workshops can be used to build student skills in paraphrasing, quoting, and citing conventions.

Leading up to the research paper assignment, faculty can use the Discussion Board in online or mixed-mode classes or small group discussions in face-to-face courses to interact with students as they explore texts, draw out relevant points, and synthesize ideas. Having students submit outlines, drafts, annotated bibliographies, or sections of the paper enables faculty to review style, references, and quoting and paraphrasing skills. This benefits students since they are not rushing to submit a final paper on deadline, thus preventing potential procrastination issues (Gibson et al., 2006).

Train in Reading Plagiarism-Detection Reports

Reframing plagiarism-detection reports as tools to identify matches rather than to catch plagiarism can help faculty train and guide students toward skills of using existing research and texts to support students' interpretation and analysis. However, faculty and students need to be competent in reading plagiarism-detection reports. The match percentage is the percentage that matches other sources, but that percentage does not necessarily reflect plagiarism. Quotations and references can be flagged in reports. While a preponderance of quotations signals lack of original thought and analysis by the student, it is not plagiarism. But the report provides a strong illustration of a quote-heavy paper and enables faculty to work on this issue with the student. Flagging quotations can also prompt faculty to see if there are in-text citations. Common phrases, common knowledge, and paper headings are among the matches identified in the report, leading to higher match percentages. Matches may be layered – meaning a match to a student paper is actually a match to a primary source. Training faculty and students in these nuances of reading the reports contributes to the understanding that these reports are teaching and learning tools to enhance writing skills.

Design Unique Assessments

When students are required to go outside of their texts by observing events, interviewing people, or using multimedia forms of presentation, they are incorporating their own unique experiences, observations, and presentation styles into their assignments. "Since one of the most frequently cited reasons for plagiarism is a lack of interest or a failure to see relevance in assignments, one of the most powerful antidotes is to make instruction more relevant, more interesting, and more social" (Evering & Moorman, 2012, p. 41). As noted by Evering and Moorman (2012), connecting to the demands and expectations of the global society in which students live and will work enhance the students' engagement with learning.

In an intercultural communication course, assignments requiring journal entries linking personal and cultural artifacts to themes and theories, analysis of verbal and nonverbal patterns at a cultural event, and the evaluation of gender roles, symbols, and cultural stereotypes in a trio of films bring the students into the assignments, actively participating and creating connections between their experiences and course concepts and theories. "In the context of the cognitive tasks, these types of assignments necessitate hands-on activity (or active manipulation of information) and are not laid out for the student on the Internet or in a book. Students have to *operate* on the information, not just regurgitate it" (Heckler, Forde, & Bryan, 2013, p. 96). Interpretation, analysis, evaluation, and synthesis of course material

and resources foster critical thinking, connections, and originality. Critical thinking leads to fewer instances of plagiarism (Heckler, Forde, & Bryan, 2013). Creating these more personalized assessments has an added benefit of being harder for students to find such papers on pay-for-paper websites.

Use Scholastic Honesty Committees as Teaching Opportunities

Scholastic honesty committees can send powerful messages to the student body regarding academic values of integrity, scholarly recognition, and accurate citations and attributions of other people's words. The model used at City University of Seattle is a blend of education and punishment. The SHB, made up of faculty and staff from all schools, treats every case on an individual basis, seeing its role as educating students on paraphrasing, use of quotation marks, and use of in-text and bibliographic references. Yet the Board's actions are punitive as well, so the seriousness of the infraction is understood and sends a clear message that academic integrity and scholastic honesty are of utmost importance to a community of scholars. As each case is different, the Board may require the student to rewrite the paper with a penalty, give the student a 0 for the assignment or a 0 for the course, or suspend the student for repeated or particularly egregious acts of scholastic dishonesty.

Based on thorough discussion with the student regarding motives, situation, prior learning, understanding of the problem and its significance, willingness to learn, and recognition and ownership of the offense, the Board assesses whether it is an educational issue or a moral problem. Getting away with using someone else's words and ideas as one's own is not an option; intentionality is irrelevant, as copying is stealing regardless of intent, and it is wrong. A student-friendly approach means teaching this philosophy to students, providing resources and guidance to prevent future plagiarism, and using plagiarism-detection reports as educational tools. Yet even though plagiarism-detection reports should be used as student-centered tools to teach writing skills, they still serve a purpose to catch scholastic dishonesty, including matches to pay-for-paper websites, large chunks of material copied word for word with few of the student's own words, no or few in-text citations or references, and the majority of the paper's content and structure coming from a single source.

City University of Seattle has a uniform, institution-wide policy that defines scholastic dishonesty and uses the same reference format across schools. This consistency in messaging is a key aspect of an exemplary practice that creates a student-friendly approach to prevent plagiarism. "While plagiarism will never be eliminated, if they wish to attack the problem with more than words and penalties, good governance is a beginning….Governance, including consistent management, cohesive policies, guidance, processes and decision-rights, is a broad canvas, but given willpower and resources, there is no reason it cannot work" (Choo & Paull, 2013, p. 293).

Conclusion

An atmosphere of learning and collaboration – fostered by efforts to reduce plagiarism, increase student awareness, and strengthen skills in synthesizing, quoting, paraphrasing, and citing – starts with the institution's efforts. Student buy-in to values of academic integrity and ethics is a fundamental ingredient to success. Equally, faculty bear responsibility for mitigating plagiarism through creating experiential and unique assessments, defining plagiarism and emphasizing academic integrity, and enhancing opportunities in the classroom to learn proper citation style and paraphrasing and quotation skills (Choo & Paull, 2013; Evering & Moorman, 2012; Gibson et al., 2006; Heckler, Rice, & Bryan, 2013). Teaching faculty and students how to read draft plagiarism-detection reports and how to use these reports to help address the causes of scholastic dishonesty is a recipe for academic success. Framing the institution's scholastic honesty committee as a tool that educates, as well as sanctions, students inculcates skills of ethics and communication, forming the coating that protects academic integrity and academic honesty of scholarly work.

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7

Exemplary Practices in Student Support

Pressley R. Rankin IV

Abstract

Faculty members in the School of Applied Leadership at City University of Seattle follow exemplary practices in student support for their doctoral program. Hiring a Doctoral Student Administrator (DSA) who is also doctorally-qualified is one practice. The DSA oversees the student support program that includes admissions, orientations, social media, and writing support. Having one faculty advisor overseeing all of the doctoral students helps the program build a community of scholarship that prevents some common issues with online learning. This paper will describe aspects of this exemplary practice, which will include examples supported by research.

Exemplary Practices in Student Support

Student support is a key practice to help students achieve long-term success in an academic program. Until recently, academic advising (typically the student support unit) has mostly focused on undergraduate students (Barnes, Williams, & Archer, 2010). Barnes et al. (2010) noted that in recent years there has been an increase in research on doctoral-level student support, typically given by a student's faculty advisor or a dedicated doctoral student advisor. The need for doctoral support is indicated by attrition rates. Spaulding and Rockinson-Szapkiw (2012) reported that studies over the last 40 years have shown an average doctoral attrition rate between 40% and 60%, and Rovai (2002) found that attrition is 10% to 20% higher in online programs. Thus, adding an additional 20% to the typically 60% attrition rate means that it is possible that attrition could be as high as 72% for an online doctoral program.

City University of Seattle's faculty were concerned about the problem of attrition when they created the school's first online doctoral program in 2011. It became evident early in the design of the doctoral program that the students would benefit from the hiring of a doctorally- qualified faculty member to support them throughout the program. The position of Doctoral Student Administrator (DSA) was created and filled in 2013 to meet this need. The DSA was specifically charged with providing exemplary student support to all doctoral students from admission to graduation.

The following chapter will present best practices in exemplary doctoral student support practices that have been used within the Doctor of Education (Ed.D.) program in the School of Applied Leadership at City University of Seattle. First, a discussion of doctoral student support practices will reveal how best practices from current research are being applied in the doctoral program. This discussion will look at general practices, the student orientation, faculty mentorship, and writing support. Then there will be a discussion of tips and current best practices used by the DSA.

Doctoral Student Support Practices

Doctoral student support in the School of Applied Leadership is designed to support the student from admission to graduation. The connection the DSA makes with the students begins with admission. Spaulding

and Rockinson-Szapkiw (2012) found that managing students' expectations about a program plays a significant role in student persistence. This includes ensuring students are matched to the right concentration and that they understand how to setup their student accounts and register for classes. Golde and Dore (2001) asserted that a lack of adequate information increases the likelihood that a student will withdraw from a program. The DSA processes all student admissions into the doctoral program and is responsible for sending out the letter of acceptance to the students once they are admitted. The admissions process is done in concert with the enrollment advisor who is in charge of processing students in the system and enrolling them in classes. The DSA and the enrollment advisor work closely together during the admissions process to offer multiple levels of support.

Student Orientation

The DSA also teaches a five-week orientation class for all incoming students. An orientation course that socializes the students to the online environment used at the university, while also educating them about the program, is considered a best practice to prevent early student attrition (Angelino, Williams, & Natvig, 2007; Wojciechowski & Palmer, 2005). The students are given information on school policies, academic writing, and APA. Exercises and assignments in the class allow the students to practice the skills they will need to be successful online while engaging in the written material. For example, the students will read the school's policy manual and then complete an open book quiz. The quiz provides feedback on what they miss, and they are allowed to take it over again until they score 100%, indicating that they have interacted with the most important policies for them to know at the start of the program.

Faculty Mentorship

Barnes, Williams, and Archer (2010) found in their study of over 2,000 doctoral-level graduate students that students valued accessibility, helpfulness, professional socialization, and caring in their primary faculty advisor. Those values are part of the core job responsibility of the DSA.

By having such a strong student focus, the DSA is accessible to students whenever they may have a program question or need to feel more connected to the program.

The DSA sends out regular emails with writing tips, APA lessons, and opportunities for workshops, webinars, and conferences. The goal of this outreach program is to have at least six personal contacts with students each quarter. Further socialization is done through the school's social media accounts. Together, this provides the students with a sense that they are part of a community of scholars instead of alone in the process. Social integration from faculty and peers is considered a best practice to prevent attrition in a doctoral program (Spaulding & Rockinson-Szapkiw, 2012).

In addition to providing socialization into the academic community, the DSA also tracks students' progress in the program and offers advice to keep students from running into delays in their studies. Martinsuo and Turkulainen (2011) found that delays in students' academic progress that result in students staying in school for longer than four years decreases students' motivation and can lead to student attrition. The DSA not only helps with planning but also uses his own experiences in graduate school to bolster students' motivation when they encounter issues that delay their progress in the program.

Writing Support

Students entering into the School of Applied Leadership's Ed.D. in Leadership program are adult learners who are typically working full-time jobs in high-level positions. It often surprises them when they struggle with writing at the doctoral level. Typically, students are usually stuck in the third level of Bloom's taxonomy, application, which Granello (2001) defined as being able to connect relevant research to a topic but unable to assess the quality of the information read. With the goal of moving students to the higher levels of analysis and synthesis, the faculty in the School of Applied Leadership designed a writing intensive class to start the program. This class allows students to engage with the topic of leadership while they write a series of papers. Students are required to turn in draft papers, which are evaluated by the faculty, and students are given detailed feedback on their work.

Caffarella and Barnett (2000) studied doctoral-level writing and concluded that feedback and critiques from both faculty and peers, while anxiety provoking for students, are the influential elements to allow doctoral students to understand and improve in the scholarly writing process. Students are supported by the DSA, their professor, and their peers during this first doctoral writing class. Students also have an option for ongoing writing support in the form of a one-credit writing support class that is offered in conjunction with whatever class students are taking. Students are allowed to turn in work on the due date and then work with the faculty member overseeing the writing support class to improve their writing and get it up to standard for the program. The paper is then resubmitted to the class and graded by the professor of that class who offers further feedback to the student on the subject matter. Together both faculty members help the students to hone their writing skills through direct feedback on their work. This technique has proven to be very successful in improving students' writing over the course of a quarter. SAL's support of writing is an exemplary practice that prepares students for the later challenge of writing their dissertation.

Tips for Success

For a program to be successful in this type of support, it is important that a doctorally-qualified faculty advisor be assigned to cover all students in the program. Dividing students among faculty can lead to a more fractured experience for students. This dedicated faculty advisor will use his or her personal experience with the doctoral process to mentor and advise students as they progress in the program. Through regular contact with students, this faculty advisor can offer tips and support when needed and be responsible for any form of community created for the students. In an online program, this most often takes the form of a social media group. Making sure students feel they have many options for connection to the program helps to manage different personality types and gives students choices for how and at what level they want to be connected.

The most essential tool used by the DSA is an Access database of student information. This database augments the information kept in the students' records by the university. The DSA can keep track of students as they move through the program and in an instant see what classes

students have taken and which courses they still need. Notes are kept on students' preferences and needs, which allows for more personalized support when managing large numbers of students. Having direct control of this database allows it to be customized to fit the needs of the program as it grows. The database provides a snapshot of how students are doing at any given moment, allowing the DSA to continuously aware of students' experiences in the program.

Conclusion

Keeping involved in students' lives is not easy in an online program. Not only are the students remote, but often classes are taught by adjunct faculty who are also not on site. Having a dedicated faculty member who is responsible for advising and supporting students during their time in the doctoral program allows for a closer relationship with students. The DSA communicates not only with students directly but with the faculty teaching each quarter to collect information on students' academic progression. This information allows the DSA to tailor communications with students that support them individually though webinars, mentorship, socialization, and community building. Having a close connection to students allows for exemplary student support and has led to increased persistence in the student body and significantly lower than average attrition rates in the program.

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Part II

Student-to-Student Engagement

8

Theatre-in-the-Round: The Art of Effectively Teaching Group Counselling Skills Using Role-play

Brian Guthrie

Abstract

This chapter will detail the process of teaching group psychotherapy skills in an experiential classroom setting modelled on theatre-in-the-round and the process of evolving role-play to a higher level of realism by incorporating scriptwriting strategies and improvisation from the disciplines of drama and theatre. The use of scriptwriting and improvisation provides richer client profiles for classmates playing group members and clearer direction on their roles in the evolving process and content of the group session. In addition, the classroom setting was transformed into a

theatre-in-the-round venue to provide observing students a closer intimacy with the demonstration of group counselling by their classmates, focusing their attention on both group process and content and enhancing their feedback observations to the group leader.

The Art of Effectively Teaching Group Counselling Skills Using Role-play

If there was a testimonial for the value and effectiveness of using role-play as a learning strategy, this student's reflection on her experience is a positive confirmation of why role-play is an integral component of student skill development:

> The group counselling role-play was a great learning experience for me. The opportunity to play the role of group counsellor in an actual group counselling setting gave me a chance to get the feel of what a real group therapy session would be like. I was able to discover myself and my style as a counsellor. It gave me an understanding of how theory is put into practice. (Personal Communication, 2015)

And yet, some students don't look forward to role-plays or may have not had a positive experience participating in role-play exercises. Inadequate focus on the identified learning objectives, the lack of planning to develop scenarios that can be perceived as realistic, and the inability of student participants to stay in character become barriers to effective learning during role-play exercises. This chapter will detail the process of teaching group psychotherapy skills in an experiential classroom setting modelled on theatre-in-the-round and the process of evolving role-play to a higher level of realism by incorporating scriptwriting strategies and improvisation from the disciplines of drama and theatre.

Role-playing is a teaching strategy that is utilized in experiential learning and considered effective for learning about complex social and human systems (Russell & Shepherd, 2010). It engages students in complex scenarios where they can apply their knowledge and experience and multiple points of view through their experience and feedback from peers and instructor. Role-playing across helping professional disciplines is considered a powerful technique for teaching clinical skills and assisting students in reflecting on their values and beliefs about counselling and clients. When effective, the benefits of role-playing are that it promotes deep-learning outcomes that are retained by students (Bolten & Heathcote, 1999), engages students in active learning, and promotes problem solving and skill development relevant to the professional domain (Hou, 2012).

For role-play to be effective in the context of learning counselling skills and techniques, participants need to demonstrate specific tasks so the interaction can replicate the real-life scenario. Students in the role of group counsellor need to focus on the learning objectives of the course and demonstrate the required clinical skills. Students in the role of group participant need to stay congruent with their character's role. The quality of the learning experience depends on the level of realism that is dependent on the participants' understanding of their roles and the context of the scenario. Dieckmann, Manser, Wehner, and Rall (2007) conducted a study of students' perceptions of real and fictional cues in role-play simulations and discovered that students' engagement was strongly influenced by the role-playing competency of the participants. They stated that the highest level of realism is only achieved when participants are properly trained.

Most instructors can easily relate to the poorly planned and unrealistic role-play that deteriorates quickly because the participants were uncertain of the assigned role and unfamiliar with the scenario context. Introverted students can easily become overwhelmed with being the center of attention and become preoccupied with not making a mistake while extroverted students take center stage and hijack the role-play scenario to become the center of attention. In other situations students confused with how to portray the role may step out of character and default to disclosing their own experience or perception of the identified role-play issue, raising ethical issues of inappropriate self-disclosure and the potential to place students at emotional risk.

Enhancing the Level of Role-play Realism

The development of role playing scenarios for this group counselling course evolved from the premise posed by Rudolph, Simon, and Raemer (2007) that the technical and logical realism of the role-play is dictated by the simulation platform and setting and that the quality of the role-playing

by participants strongly determines the psychological and emotional fidelity of the role-play. As Sanko, Shekhter, Kyle, Di Benedetto, and Birnbach (2013) emphasized, "participants must perform their part upholding the character's role, the lesson objectives and the realism of the scenario" (p. 215) in order for the role-play to be effective as a learning strategy.

With the goal of promoting a higher level of role-play realism and to provide adequate training for participants, students are assigned the role of group counsellor and develop the role-play scenario. Based on their research assignment of developing a proposal for group counselling for a specific population presenting with a specific problem, the role-play is developed to be congruent with the lived experience of those clients.

The students' first task is to develop their role-play to replicate a 50-minute group counselling session that they develop for their group counselling proposal. Their next task is to conduct the role-play to demonstrate all the course learning objectives. The course learning objectives are to: (a) effectively lead a group psychotherapy session by managing both the content and the process that evolves between group members and between group members and the group leader; (b) effectively demonstrate group counselling skills; and (c) successfully engage group participants in problem solving. Replicating a complete group counselling session as opposed to compartmentalizing the learning objectives into separate role-plays further promotes a higher level of realism. Across the course, student participants and the peer observation group experience the process of counselling from engagement to the working problem resolution stage to the termination of the group.

Scriptwriting and Improvisation

Students are introduced to and incorporate the use of theatre and acting methodology to enhance the realism of role-play scenarios (Sanko et al., 2013; Barney & Shea, 2007; Smith, 2009; Sheperd, 2002). In particular, students are coached in the techniques of scriptwriting and improvisation and how to incorporate them into role-play development to provide richer client profiles for classmates playing group members and clearer direction on their roles in the evolving process and content of the group session.

Scriptwriting

Group participants are provided a narrative back-story that includes the contributing social and emotional factors that contribute to the presenting problem. In addition, participants are assigned a specific problem group behavior that is congruent with their presenting problem behavior. This poses a challenge to the group counsellor to intervene effectively to promote continued healthy group progress. Including the techniques of scriptwriting in role-plays promotes realistic scenarios, supports the inclusion of scenarios that are more challenging, and provides opportunities to practice advanced counselling skills. For example, including a client profile that is resistant to participating in the group process provides the group counsellor experience in dealing with conflict and group cohesion. Additionally, including deeper emotional content that poses issues of risk to the individual or group members provides the group counsellors experience with assessing and intervening in situations where the individual discloses suicidal ideation or harm to their children.

As one student in the role of group counsellor reflected:

> It is easy to write a back-story to set the stage for group participants to display behavior and emotion congruent to their character. It is quite another thing to watch in amazement as the story unfolds with real emotions and behaviors that at times are so visceral you believe the setting is real. (Personal Communication, 2015)

Improvisation

Improvisation is defined as the act of improvising, or of composing, uttering, executing, or arranging anything without previous preparation (Dictionary.com, n.d.). Students are introduced to the improvisational concepts of playing, letting oneself fail, listening, collaborating, and playing the game by following the rules. In the context of the group counselling role-play, the game is group counselling and the rules are following the script and staying in character. In the process of improvisation, rules free up the individual to improvise by guiding their impulses and funneling their creativity (Morris, 2011).

Theatre-in-the-round

The theatre-in-the-round provides more than just a setting to replicate the traditional teaching format of a double-fish bowl arrangement where half the class observes and half the class participates as group members. Transforming the classroom into a theatre-in-the-round venue provides students with the experience of closer intimacy with the demonstration of group counselling by their classmates and focuses their attention on both group process and content, enhancing the feedback observations to the group counsellors.

The theatre-in-the-round is intended to provide a metaphor of an ongoing play where students are immersed into the action where they observe and participate in the evolution of group process from the engagement session to the working stages of group counselling to the termination stage of a group. In essence, the learning takes place in the experience of a number of acts within a play where students experience the process of group from the perspective of participant and audience. Following each group counselling demonstration, students are engaged in an actors' workshop where the process and content of group are evaluated, where the group counsellor is given feedback by observers and participants on the effectiveness of their skills and interventions, and where feedback is given on how to improve future groups to increase the realism and believability.

Conclusion

This chapter presented a narrative of the process of evolving role-play to a higher level of realism in a group counselling course through the use of theatre and arts methodology of scriptwriting and improvisation. The incorporation of scriptwriting provides rich role descriptions and a specific narrative of each client's possible lived experience. It provides the participants a script with which to stay in character and enhance the realism of the role-play scenario. Participants are encouraged to let the characters become them as opposed to just playing a role. In addition, they are coached to improvise in relation to the interaction between themselves and other group participants and their interaction with the group co-leaders and not to ad lib what they imagine the clients' lived experience might be.

Lastly, an unexpected benefit of transforming the classroom into a theatre-in-the-round venue is that the students' feedback of being a participant or an observer became a conversation of what is their most significant learning and an identification of missed opportunities to demonstrate a skill as opposed to critical feedback on errors in counselling technique or group process.

The outcome of incorporating the techniques of scriptwriting and improvisation in the context of theatre-in-the round resulted in a strong correlation between the realistic quality of the role-plays and achievement of the course learning outcomes. As one student in the role of group counsellor reflected:

> Overall, I am so happy to have participated in this assignment. Although a little freaked out at first, it allowed me to practice, this being something I truly value. The whole assignment combined (proposal and role-play) gave me a true sense of work as a group counselor which is something I appreciate. Sometimes we are taught things that apply nicely in the classroom, but when trying to apply them to the real world we don't have the same tool set. With this project, I believe it allowed me to integrate into our learning real-life skills. There may have been some mistakes along the way, but these mistakes only helped me to know how to be better. (Personal Communication, 2015)

The outcome is at this point anecdotal evidence. The test of the anecdotal narrative is to apply a more systematic investigation to determine if the application of theatre and acting methodology improves the skill development of students and if the process of developing as realistic as possible role-plays enhances the achievement of learning objectives. Future research is needed to provide empirical evidence of whether enhanced, more realistic role-play is any more effective than traditional role-play.

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9

Facebook Groups and Pages Integration in the Higher Ed Classroom

Danielle Babb

Abstract

Social media use has grown in the past five years, with most users engaging several times per week. In this paper, the potential impact of Facebook Pages and Groups on learner retention, sense of community, and relationship building is analyzed. Best practices for professors and administrators to use Facebook for the purposes of building a sense of community, sharing information and networking, and maintaining a positive relationship between students, administrators, and instructors in the online classroom are examined.

Facebook Groups and Pages Integration in the Higher Ed Classroom

Students are using social media frequently in their day-to-day lives, creating their own communities and identifying with groups online. Yet, most university efforts on social media sites are based on marketing goals rather than building a sense of community and networking. This is evident as indicated through social media standards policies, university enforcement against professors creating groups or pages that may reflect on the university, and a general lack of support for professors offering support online in more innovative ways.

In this chapter, opportunities for increased retention and a sense of community through social media are identified, data about building a sense of community online and the perceived and *real learner* benefit is examined, and tips are provided on how to integrate social media into the classroom.

Using Social Media in the Classroom May Increase Engagement and Retention

According to Pew Research and the Pew Internet Project's research on social networking, as of January 2014, 74% of online adults use social networking sites (Duggan, Ellison, Lampe, Lenhart, & Madden, 2014). While the data on use is relatively similar for men and women (72% and 76%, respectively), there is even higher use among the traditional higher education online student demographic, at 89% and 82% for individuals ages 18 to 29 and 30 to 49, respectively. The growing popularity of mobile devices and smartphones has made social media networking even easier and more adaptable to a location-independent model. Additionally, research suggested that users of social networking sites have closer social ties and are half as likely to be socially isolated as an average American. Users are more likely to be open to opposing viewpoints, which is vital for critical thinking in education (Duggan et al., 2014).

A common theme in online education is the need for connectedness and a sense of community and belonging to help retain learners and maintain interest in continuing education. Studies have been conducted on cognitive presence and engagement (Akyol & Garrison, 2011), relationship building in online learning (Boston et al., 2014), and sense of community in education after using social media sites (Gashim & Shepherd, 2014).

Educators and administrators struggle to create a sense of community using blogs, forums, newsletters, and social networking pages designed to push content out to users who like a particular page or engage in a group. Often driven by marketing or public relations teams, schools continue to try to use traditional marketing methods to engage a nontraditional student. Relying only on Facebook Pages can create issues if students perceive a page to be a marketing tool, rather than an active engagement tool. Facebook Pages feels less like a community and more like a unidirectional outreach channel. Facebook's own documentation on Groups versus Pages suggests Groups are better for creating a sense of community (What are the privacy options, 2015). A study conducted by McCorkindale, DiStaso, and Sisco (2013) noted that when studying Millennials and how they prefer to interact with organizations on Facebook, they were very specific about who they wanted to engage with, for what purpose, and how. Namsu, Kee, and Valenzuela (2009) noted that the following were reasons why students joined Facebook Groups:

- to obtain information about activities,
- to socialize,
- to seek self-status, and
- for entertainment.

A study by McCorkindale et al. (2013) noted that 91% did not associate or accept friend requests from organizations they did not know, and 86% checked their account daily (p. 78). Among the most *liked* groups or organizations on social media were college organizations (McCorkindale et al., 2013). Ninety-one percent of respondents were members of Facebook Groups, which implied that there is significant benefit for schools to reach a greater percentage of their student population through the use of Groups.

No studies have been published on the use of Facebook Groups as engagement and retention tools in higher education, instead focusing on student-led discussion and classroom material distribution. A study conducted in 2012 asking students to use Facebook Pages in the classroom, as a method of receiving learning material for their course in their newsfeeds, resulted in data indicating that 93.1% of students had an active Facebook account (Irwin, Ball, Desbrow, & Leveritt, 2012). Eighty percent

noted that Facebook use increased their participation in general discussion about course topics, 80.8% of the students indicated the Facebook engagement increased their interaction with fellow students, 75.6% indicated they used it to receive notifications for lecture note availability and assessment items, and 56% indicated it gave them exposure to relevant media and learning materials (Irwin et al., 2012, pp. 1221-1232).

Rather than taking the more traditional approach of asking students to go to a page, blog, or newsletter to comment on an article, learn information, or follow up on a topic that may feel like a marketing effort rather than an educational one, many educators have begun posting articles and pieces of interest on professor pages and in informal groups run by professors. Facebook Groups and Pages have little oversight by administration or marketing. While this has created discomfort among some in leadership positions, many facilitators are finding it useful to create a sense of community and purpose, find common bonds, learn about one another's interests, and help students network for jobs during their education or post-graduation.

Examples

Many professors are beginning to create Professor Pages, where they share information about the area in which they are a subject matter expert (SME). While this may also benefit the professor due to increased visibility (particularly when search engine optimized), learners benefit from having information about a topic they can access during and after class and staying connected to professors who may help them network for jobs post-class session. In a graduate business strategy course, the researcher used Facebook Pages to share information for assignments, 86% of students (n=22) indicated they found the page helpful, 77% checked it at least once a day, and 90.9% indicated they connected with classmates they believe they would not have been able to identify or locate without the Facebook Page.

In a graduate program in Information Technology over a two-year span, 57% of the researcher's students (n=225) maintained connectedness to the Facebook Group even after the researcher was no longer actively posting material. During active participation, 77.7% of students were frequenting (one time or more per week) the Group for help with homework. Nineteen resources were posted by students in files related to labs to help students get through difficult problems; 90% of the posts were job information, job sharing, and helping one another with resources to secure employment. One other professor from the department was in the Group, and while the university was aware of the Group and other professors told their students about it, the university allowed the Group to be run by professors only. When an administrative assistant joined the Group and told the Dean about post content, students became aware of the intrusion and participation dropped by 85%. Prior to this, the Group was an excellent source of content, additional assistance, networking, and job help, while creating a strong sense of community between students and professors.

Tips for Success

When using Facebook Pages, it is clear from research data and student feedback that universities need to create a sense of community and bi-directional relationships, and not use the platform for marketing only. Users will tend to tune out marketing messages or *Unlike* the Page. Professors should post relevant and timely material and post often enough to keep students frequenting the Page. Professors should make it clear to students what the privacy risks are—that the participants who like the Page are not kept private and should be instructed to secure their own privacy settings as they wish. Professors sharing information freely should use hash tags to help others in the community join the conversation and enrich the learning opportunities.

When using Facebook Groups, professors should limit the number of administrators and be sure to moderate daily (or several times per day). Facebook Groups marked *Secret* are not searchable and, therefore, do not offer students the benefit of having others from the institution or other areas of study join the Group. However, open Groups do provide limited privacy; therefore, it is recommended that Groups be marked *Closed*, which requires approval before one can join. This helps limit spammers and keeps tighter control over the Group while still allowing the sharing of information and the Group to be searchable and indexed. It is recommended that all participants be allowed and encouraged to post first without administrator approval, but that administrators turn on email notifications so they are aware when a new post is created to ensure the privacy and integrity

of the Group (What are the privacy options, 2015). Professors and administrators should share relevant information often and encourage other classmates or alumni to join the Group. Administrators can add the link to newsletters, communications with students, and in signature blocks to increase Group awareness.

Conclusion

Facebook Groups and Pages are powerful tools for professors to reach students where they already are—online in social media platforms—rather than requiring them to engage in sources that require an additional step (e.g., blogs, forums). This improves connectedness, a sense of community, sharing of information, and possibly retention. Professors and administrators who are more liberal with their policies of social sharing may improve the peer-to-peer and student-to-institution relationships.

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10

Student Accountability in Online Team Projects

Gregory Price

Abstract

Teams are an important functional business tool used to solve problems, and, as businesses become more globalized, virtual teams are becoming the norm. Today, between 50% and 80% of all U.S organizations are incorporating the use of virtual teams (Germain, 2011). This shift has created a need to build more effective teams and for universities to educate students on how to become more effective contributors to the virtual team environment (Gilson, Maynard, & Bergiel, 2013). With all teams, trust has proven to be an effective motivator and this is even truer in the online world (Anson & Goodman, 2013). Thus, researchers are exploring instructional strategies to address student accountability, believing that accountability and communication protocols drive trust. This paper will focus on how instructional design can influence student accountability within the virtual online classroom, and it will describe a method of instruction to effectively teach team collaboration.

Student Accountability in Online Team Projects

Global teams are quickly becoming the norm; between 50% and 80% of all U.S organizations use teams (Germain, 2011). Globalization has created the need to resort to the cost-effective approach virtual teams provide. Often, teams are found to be made up of departments in different countries and time zones, and they are populated with diverse cultural representation. They include an infinite number of different processes, consist of region-specific challenges, and have variable market demands. Within each team, the challenges are unique, thus creating successful virtual teams is no easy task. Effective teams tend to be those made up of individuals who have worked with one another before, but today, managers thrust teams together with little preparation and with members who have little understanding of each other (Wesner & Hobgood, 2012; Chen, Wu, Ma, & Knight, 2011; Germain, 2011).

In a recent conference attended by college professors, several students were invited to share their student experiences. Within their address, they pleaded with the group to remove all group assignments "at least until you figure out how to fairly grade each student's individual contributions" (Glenn, 2009, para.1). It is a common instructional practice – setting up teams to create an engaging environment and to develop collaborative skills, all for the purpose of supporting employer needs to develop graduates with these skills.

Highly Effective Global Teams

Effective global teams start with a vision and clear outcomes, and a leader who communicates these continuously. Leaders of effective teams take responsibility for the team's results, openly discuss conflict in a non-personalized manner, and communicate work horizontally rather than vertically. Consequently, communicating the vision and working toward that vision has worked for served leaders well (Guttman, 2013).

Literature points to specific qualities inherent within high-performing teams. Leaders set this tone by creating alignment that defines roles regionally, as well as individually. Rules of engagement are also well-defined and incorporated into the team's charter. These rules support decision-making protocols that balance team emotions and utilize communication to end potential conflict (Guttman, 2013).

Getting to this point, leaders address a number of questions that arise in all team environments. As teams form, they will meet to address common challenges found within the problem that the team was formed to solve. They will identify gaps and explore ways to address a fix. Team members will (a) develop work processes around the team's common strategy and vision; (b) consider how the team can take a broad view approach with an enterprise mindset; (c) challenge the silo mindset and create processes that form a more integrative approach to problem solving; and (d) create an operating agreement that clarifies individual roles, responsibilities, and milestones for deliverables (Guttman, 2013).

The 'Trust' Factor in Teams

The attributes of high-performing virtual business teams can be reconstructed into successful online learning teams within graduate coursework. Most research has identified a single outstanding component that ensured team success. That single trait was "trust" (Germain, 2011). Since the turn of the century, global teams have been created to address problems found in challenging new markets, but they have also underscored the need for leaders to improve their understanding of how to lead these new virtual teams. A positive, rational notion to today's virtual teams lies in their ability to address new market realities and to adhere to budget constraints due to less travel being required, but leaders have not yet figured out how these positive elements can balance the culturally diverse challenges that make up these new global teams. This has created team cohesiveness issues leaders are now grappling to address.

With the goal of creating a winning deliverable for the team project, there are measures to build trust within a virtual environment, and research has pointed to some common trust-building measures in high-trust team environments. Some of the key aspects to build trust include (a) starting early on their projects; (b) interpreting due dates for deliverables with milestones incorporated that ensure compliance; (c) discussing communication strategies; and (d) discussing time-zone differences and aligning frequency of communication (Wesner & Hobgood, 2012; Chen, Wu, Ma, & Knight, 2011; Kirstein, 2011). Further trust building tactics include an

understanding that feedback closes the communications loop, identifying individual strengths and weaknesses, and defining strategies to address conflict resolution (Germain, 2011).

Translating high-performing team values into team learning requires instructional design, student-centered metrics, and faculty interventions. Assessments need clearly stated outcomes, a rubric that shows graded metrics, and a course timetable where the instructor checks in with the teams (Germain, 2011). Setting clear expectations in the assessment creates the vision for team learning. The vision supports an environment for the team to focus on other team essentials such as establishing individual roles and expectations, identifying specific outcomes, and tracking deadlines that help the team stay the course (Guttman, 2013). As each member helps to develop the team's accountability standards, they ensure that they have a license to speak and a clear and established channel open for members to be candid in a non-personal communicative manner that supports resolving outstanding team issues (Guttman, 2013).

Trust as a Success Driver

Trust is a major factor to the success of virtual teams (Wesner & Hobgood, 2012; Chen, Wu, Ma, & Knight, 2011; Germain, 2011). It is historically important within "psychology, sociology, negotiation, strategy, and organizational behavior disciplines" (Germain, 2011, p. 31). Trust is the emotional link that bonds between the distance that make up the virtual team and the success that the team experiences (Germain, 2011). Chen, Wu, Ma, and Knight (2012) found that communication, expectations, and clear decision-making protocols significantly improved team performance. Trust is the ingredient that gives the team an opportunity for success and has been considered more important within virtual teams where face-to-face communication does not exist (Germain, 2011). Risk is a factor inherent within virtual teams where each team member works independently; trust is an inherent component to the success of the team. Yet, trust among team members takes time to build and over time its development expands (Kirstein, 2011). This reliance on trust and the risk associated with the independent variable can be incorporated into the team's communication strategy without appearing to be a managing technique on members just by virtue of incorporating the expected communication protocols (Germain, 2011).

With heightened trust among team members, successful team attributes begin to appear. Teams develop a spirit of cooperation where collaborative relationships are formed. Individuals adapt to change, solve difficult problems, develop leadership traits, and improve information sharing and flow regardless of how diverse team members may be from one another (Germain, 2011).

Virtual Team Tools

To facilitate online team learning that will help advance student interaction leading to successful student learning, universities might incorporate a team charter or operating agreement that defines the practical measures needed for virtual team accountability. This charter or agreement includes contact information, a skills inventory, student availability, operating rules, communication protocols, milestones, and a section on accountability. Team charters and agreements have been shown to elevate team performance when incorporated into team projects (Germain, 2011). Many schools and faculty members incorporate team contracts into their requirements, but do not follow through to ensure these contracts are completed and followed. Instructors are advised to provide strategic interventions into the team experience throughout the course.

Conclusion

The goal of this paper involves studying the characteristics of high-performing teams in the global marketplace and identifying the gaps that currently exist. Having a clear understanding of these gaps is necessary to incorporate them into online student learning where appropriate student training can occur. Instructional designers are to incorporate these mechanical elements needed for high performing virtual team environments into student learning assessments and outcomes while students develop their team charter or agreement. These communication protocols will support the accountability measures needed to build the trust necessary for teams to thrive and become high performing themselves. These

learning strategies will become valued lessons learned within the student learning environment that support employer needs required in today's global workplace.

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11

A Collaborative Approach to Corporate Leadership Training

Elizabeth Fountain and Kurt Kirstein

Abstract

Leadership training is increasingly important as impending retirements suggest an oncoming leadership void. Organizations need to train future leaders rapidly for maximal impact on operational performance. Yet, traditional leadership training models are constrained by curricular, participatory, or geographical limitations and frequently fail to deliver the results organizations seek. Through collaborative design and delivery methods, City University of Seattle has developed an alternative model of leadership instruction that involves trainees, their managers, and the organization's senior leadership. This chapter describes this leadership training model, explaining how it is able to rapidly impact organizational performance for all participants and avoid the limitations that can undermine the effectiveness of traditional approaches to leadership development.

A Collaborative Approach to Corporate Leadership Training

"I'll tell you what scares me," shared a doctoral student, who also serves as a human resource director in her large multinational corporation, in a consultation about her dissertation. "Hundreds of years of experience and organizational wisdom will walk out the door, as our baby boomer generation retires. And we don't have any idea how to effectively transfer their knowledge to the next generation of leaders." This student is not alone; many fear that leadership skills, refined by direct and tacit training and experience, will leave with the retirees, creating a crisis in the critical abilities organizations need to advance their missions (Aarons, Ehrhart, Farahnak, & Hurlburt, 2015; Boittin & Theys, 2014; Corporate Learning Priorities, 2014; Goodman, 2014; Gordon, 2014; Peet, 2012; Shandler, 2014; Sims, 2014).

Organizations that seek to invest in training in response to this crisis encounter a number of problems. Traditional corporate soft-skill training is usually offered in a classroom format, using face-to-face delivery (Czeropski, 2012; Godat & Atkin, 2011). Key employees, who are often selected for leadership training because of their high potential, are thus taken away from their regular duties for extended periods of time, impacting productivity (Czeropski, 2012; Godat & Atkin, 2011; Kaur, 2013). Conversely, there isn't always the return in capability that the leadership training was intended to deliver. The traditional approach to employee leadership training only serves local employees who have access to the location where the training is delivered. The exclusion of remote employees in this day of multi-location and multinational companies greatly reduces the benefits of the training. A significant issue with traditional leadership training is its lack of a collaborative element in the design and delivery of curriculum (Masie, 2012). Training providers typically design training based on the ideas and concepts they want to deliver rather than the needs of the organization, and training is often delivered in isolation from the real problems the organization faces (Aarons et al., 2015; Godat & Atkin, 2011; Goodman, 2014; Masie, 2012). Since it is removed from the daily organizational operations, training frequently fails to deliver to expectations. As a result of these factors the initial run of leadership training may not be repeated, leaving the initial problem unsolved.

As organizations seek solutions to the pending loss of leaders, they turn to training providers who can deliver highly relevant learning experiences for their high-potential employees. A best-practices leadership training model focuses on developing key skills in high-potential employees in a way that: (a) does not pull the employees away from their jobs for long periods of time; (b) is accessible by employees in all locations; and (c) is tied directly to the operations of the organization, thereby making it highly relevant. This paper describes the development and delivery of such a model. It emphasizes the collaborative nature of the model as an exemplary practice that can be applied to any training situation or context.

Collaboration: An Exemplary Practice

The exemplary element of City University of Seattle's approach is building in a mechanism for collaboration with the organization seeking the training. The method incorporates a standard curriculum, based on contemporary leadership theory and practice, and customizes it to an organization's specific needs via a collaborative design and delivery process. At the start, organizational leaders participate in the design of the curriculum for their participants, through a series of workshops involving course developers. Furthermore, in at least one successful model, the organization also requires managers (the direct supervisors of participants in the training) to engage in weekly conversations with participants regarding the topics being studied. Additionally, participants collaborate during instruction delivered via live virtual seminars, hosted by the instructor, that link participants through web conferencing tools. By building multiple levels of collaboration into the training from design through delivery to instruction, the training is well-positioned to create stronger leaders and a stronger organization.

Kirkpatrick and Kirkpatrick (2007) developed a four-level evaluation model for corporate training that emphasizes results not only for individual learners, but also for the organization as a whole. The final level of evaluation focuses on establishing clear goals for the organization, addressing increases in engagement, productivity, and/or capacity that will result from the training. The collaborative nature that is built into the design and delivery of the leadership training, that is the subject of this chapter, provides a strong foundation for achieving these goals. By its very design the training becomes far more strongly integrated into organizational life than a traditional, site-based, stand-alone training.

Collaboration in Action

Collaboration is built into the leadership training approach in three ways: first, in the design phase, which is conducted with a team designated by the organization to "steer" the training program; second, in the delivery, as managers become involved in bringing the learning to life; and third, through instruction, as participants co-create discussions in virtual seminars and online discussion boards focused on the topics under study.

In the design phase, collaboration began with a series of meetings focused on specifying the learning outcomes and topics to be covered. Once these were determined, the collaboration continued with conversations on choice of instructional materials and activities. Next, a demonstration "class" was created, so the steering committee could experience the instructional environment. The final step in collaborative design was an agreement to involve managers through weekly journal entries written by participants, documenting conversations with their direct supervisors on the relevant topics.

The expectation that managers would be involved throughout the leadership training course led to developing orientations that included them in the process of preparing for course participation. At these orientations, managers also provided input into the design of the course, helping to make content, flow, and expectations even more relevant for their teams' needs. As the course proceeded, both participants and managers indicated the weekly conversations created high value. Managers understood what their employees were learning in the course and helped them apply the concepts to the real challenges facing them. Participants gained a real-time window into the life of managers and leaders in their organization, expanding their perspectives and helping with the transfer of both explicit and tacit knowledge from seasoned to new leaders.

During course delivery, the instructor and the participants gathered weekly for virtual seminars, using web conferencing tools that allowed for real-time discussion and interaction regarding the course topics. The emphasis during these instructional sessions remained on immediate application of the concepts under discussion. Participants could ask questions and learn from one another's experience, a hallmark of collaborative and constructivist learning philosophies.

Ensuring Success

This collaborative approach to leadership training works best when the partner organization is motivated to collaborate; designates a steering committee or other body with decision-making authority; and supports its managers and employees in participation (Godat & Atkin, 2011; Masie, 2012; Technology and talent, 2013). The model could be used for any content – not just leadership, but any skill- or content-based training approach. However, if the partner organization desires a more hands-off approach, delegating all design and delivery to the academic institution, the collaborative model would prove incompatible.

Success is also dependent on selection of appropriate participants as learners in the training courses. Because the high level of manager involvement requires time and effort, managers need to be involved in selecting the members of their teams to participate. Participants should be strongly motivated, with the potential to move into leadership roles in their organizations.

Finally, collaboration does not end at course delivery (Masie, 2012). For this model to succeed, communication mechanisms need to be in place to support the ongoing assessment and improvement of the training offerings. In the cases described here, weekly teleconferences between the project manager at the organization and the course instructor and course manager at the academic institution ensure quick issue resolutions and course corrections as needed.

Conclusion

Leadership training is becoming increasingly important as a large group of experienced leaders gets ready to retire. Traditional leadership training, delivered in classroom format for a small group of localized employees, can take a good deal of time to impact the organization in a positive way, and often, discernable benefits are not seen from these programs. There is a need for a leadership training model that can have a more immediate impact on an organization's performance for a wider group of geographically distributed participants.

The collaborative nature of City University of Seattle's training model addresses this need. The program's requirements are determined by the organization's senior leaders. The curriculum is developed through a collaborative effort merging accepted leadership theory and practice with the specific needs of the organization. The program is delivered using web-based technologies for live and asynchronous activities, which eliminates geographical restrictions. And, perhaps most importantly, the program integrates experienced leaders at the organization into the learning process of the participants.

The collaborative design of this program accelerates the impact that it is able to have on the operational efficiencies of the organization. Such training models, for leadership and other disciplines, represent exemplary practices that can be valuable in helping to transform operational effectiveness in today's rapidly changing organizations.

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12

Enhancing Student Learning Outcomes through the Integration of Team Projects into Instruction

Jean Ann French and Marie Kavanagh

Abstract

This paper reviews how team projects are integrated into learning with enhanced outcomes. CAPSIM is a business simulation software used by many universities to "develop and assess business acumen in an interactive, real-world environment" (www.capsim.com). Two universities came together into one CAPSIM shell, which offered a unique opportunity to study team project-based learning; the e-learning environment; and the assessment methodology of Tuckman and Jensen's (1977) stages of team development and Myers-Briggs Type Indicator (MBTI). Strategic

management simulations online is a learning-by-doing tool where university students can learn how to work on team projects. Employing the online technology of CAPSIM, using team building skills, and offering self-assessment of management styles while working on a team project-based learning program creates a dynamic learning environment for the students that prepares them for the realities of the workplace. This project enhanced student leadership styles, developed teamwork skills, and provided an environment rich for building successful project-based learning teams.

Enhancing Student Learning Outcomes

In 2014, a capstone class from City University of Seattle was scheduled for a CAPSIM session when a partner school, University of Southern Queensland (USQ) in Australia, had a CAPSIM course scheduled for nearly the same time frame. It was proposed that both classes could compete within the same CAPSIM session. The competition became a truly global event with American, Venezuelan, Turkish, Bulgarian, Vietnamese, and Australian participants. One team was made up of on-campus students, while the second team was made up of online students.

This chapter describes the benefits of a team project-based, e-learning environment and assessment methodology. CAPSIM is an interactive online program that offers students a team and company environment by which a company operates for five years (five competition rounds). The students are given the opportunity to test assumptions, run a pro forma, and learn from mistakes, whereby "students get the chance to apply what they've learned across all disciplines of business in one strategic, competitive, and engaging learning experience" (CAPSIM, n.d.). Lee and Lim (2012) reported, "Team project-based learning is reputed to be an appropriate way to activate interactions among students and to encourage knowledge building through collaborative learning" (p. 214).

In addition to the simulation program of CAPSIM, instruction is augmented on teambuilding using Tuckman and Jensen's (1977) stages of team development with the students having the knowledge of the five stages in conjunction with learning their MBTI from Jung's Typology test online at HumanMetrics.com before the students compile their team charter. The remainder of the paper demonstrates how enhancing student learning outcomes through the integration of team projects into instruction could become an exemplary practice.

Teaming

Fruchter (2001) found that global teamwork opportunities respond to an industry need to improve and broaden the experience of undergraduate students to understand the acquired theoretical knowledge in multidisciplinary, collaborative, practical, project-centered environments. Magzan, Aleksic-Maslac, and Juric (2010) suggested that the inclusion of teamwork as a learning strategy in business education has multiple benefits. Involving students in collaborative projects helps them to recognize, value, and capitalize on the strengths of other people in interactive business situations. It also helps their understanding and experience with cooperative group processes by thus providing them with essential team skills suitable for different types of employment.

Lee and Lim (2012) studied team project-based learning and learned two key lessons: the importance of social competencies for a communal society, and that "students find social contributions, such as organizing or coordinating managerial abilities, more important than cognitive contributions when they evaluate peers" (p. 214). Team project-based learning promotes knowledge building through social interaction and is increasingly used as a teaching and learning method in higher education (Von Kotze & Cooper, 2000). Project-based learning has attracted educators' attention as an alternative teaching method for enhancing learning effectiveness in higher education through social learning (Jung, 2001). Another benefit of team project-based learning is the promotion of higher learning skills which include cooperative ability, critical reasoning, creative thinking, responsibility, and communication (Moursund, 2003).

McCabe (2006) made a case for the importance of learning how to be a team:

> Traditionally when we think of teams we consider work groups, or departmental teams who all report to the same leader. However, as today's flexible workforce evolves, organizations are increasingly dependent upon 'virtual teams' brought together with a specific, sometimes short-term outcome to achieve. These may be

> cross-functional, inter-disciplinary teams, project teams, or cross-organizational and cross-cultural teams. The nature of these teams is quite fluid and altered by many factors, such as the outcomes they set out to achieve, the timescales and frequency of their need to co-operate, and the conflicting priorities of team members. (p. 117)

The CAPSIM program suits the modern day classroom, as learning and teaming no longer take place solely in the classroom. Virtual team project-based learning serves as a model for real-world application.

Teamwork in Instruction

Teamwork is the key to the CAPSIM experience. A team's cross-disciplinary knowledge and skills development evolves over the life of the competition and also pulls from previous courses in the program. Students are expected to engage with other team members in a cross-disciplinary project-based environment. A focal point is the effective use of technological online resources to support instruction and learning outcomes. Through CAPSIM, the students are able to develop a holistic understanding of basic business principles via a project-based team learning experience. All business disciplines have a broad body of knowledge and can be learned in theory, but participating in how business works in an online simulation program creates deep and ongoing learning.

The premise of CAPSIM is the assignment of $40M to each management team that takes over a struggling company. Each company must balance competing needs and demands to keep their business on a clear strategic path. The students are led to understand how the individual parts of a business impact an entire organization by being the decision-makers for a business in a competitive marketplace. Not only do the students compete against fellow teams; CAPSIM provides computer team(s) in the competition for additional benchmarking purposes. Students get the "experience without the real-world risk, along with the opportunity to build a product portfolio, manage costs, analyze the market, and develop forecasts, all with an eye on cash flow and balance sheet management (CAPSIM, n.d.).

CAPSIM is strategically used as an instructional capstone project. Online learning teams have generated attention to the social and cultural characteristics that influence these global interactions (Khalsa, 2010). CAPSIM is best used for the capstone course with students who are on the brink of joining the workforce, as the team interaction of project-based learning prepares them for the real-world dynamics of the workplace. Lee and Lim (2012) believe that "the learning goal of team project-based learning is best achieved when teams are effectively collaborating" (p. 222).

Before a team can be a successful team, the individual members must learn how to be a team and in many cases how to learn what each individual's management style is and how it interacts with other styles. Two tools used in team development are Tuckman and Jensen's (1977) stages of group development and Jung's Typology test, which gives a Myers-Briggs Type Indicator (MBTI). The first step to building a team begins with individuals taking the Jung's Typology test at HumanMetrics.com. Rodriguez, Mesa, Balsera, and Garcia (2013) assessed engineering teams with regard to project-based learning by using MBTI.

> Although MBTI strictly speaking just only identifies a personality type of an individual, it taps into key aspects of personality and behavior in areas such as communication, problem solving, decision making, and interpersonal relations. Several studies have also related MBTI profiles with leadership styles. The MBTI also helps in understanding group dynamics, analyzing shortcomings in an individual's style and how the style affects the group as a whole. (p. 1127)

Once the MBTI for each person has been established, the team can begin the four stages of group development established by Tuckman and Jensen (1977): (a) Forming, (b) storming, (c) norming, and (d) performing. The final stage of adjourning comes after the conclusion of the project. Today's teams are often cross-cultural, virtual, and global. McCabe (2006) promoted the idea of understanding the MBIT to prepare for Tuckman and Jensen's (1977) four stages because "it requires individuals to gain an understanding of their fellow team members' skills and abilities as well as an appreciation of their personal style" (p. 117).

In summary, a solid team can be built with an MBIT and briefing the students on Tuckman and Jensen's (1977) stages of group development before the team launches the project-based learning program of CAPSIM.

Conclusion

Instructors can prepare students for the realities of the workplace by using online technology, developing team building skills, and requiring a self-assessment of management styles to participate in a project-based learning program. Martin-Perez and Martin-Cruz (2012) evaluated the effectiveness of strategic management simulations as a learning-by-doing tool so that university students can learn to work in a team. Besides developing the team skills, the role of teamwork in business education prepares students for the challenges posed by innovation and communication in the global economy. Rodriguez et al. (2013) concluded that MBTI is effective in team building and prepares the students for group dynamics. Coupled with Tuckman and Jensen's (1977) development stages, it adds to the final success in a group. "Knowing more about the personality of the team members, their leadership styles and how different personalities get along or conflict with each other can be useful information for building successful PBL groups" (Rodriguez et al., 2013, p. 1127).

The international connection between teams would benefit from a televised or video face-to-face meeting. There certainly was an underlying sense of competition between universities; however, CAPSIM is a naturally competitive environment between teams. Faculty members observed a difference between the countries with regard to motivations, goals, and approaches. The contrasts must be studied further to determine if it is a cultural factor or the degree programs that stimulate the differences.

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Part III

Student-to-Self Engagement

13

Visualization Techniques to Cultivate Data Literacy

Lindy Ryan

Abstract

Visual literacy, supported by the use of visualization in teaching and instruction, ultimately achieves a greater degree of learning (Stokes, 2002). This chapter will discuss and analyze how visualization approaches, coupled with a focus on increasing information understanding and analysis, will extend visual literacy to cultivate visual data literacy; construct critical and higher-level thinking; encourage data-driven decision-making; and transform learning from a participatory, passive experience to a rich and interactive one via visual dialogue. This chapter will provide examples for how to integrate information and visualization to develop data literacy, drawing from academic literature and case studies from practiced, interdisciplinary data visualization educators.

Using Visualization Techniques to Cultivate Data Literacy

Established learning theories outline how learners acquire different types of information and through which processes (including classic conditioning, behavior theory, functionalism, sign learning, mathematical learning, information processes models, and/or neuron-linguistic programming and cognitive sciences) (Penrose, 2006). As a core construct, many of these support the role of visualization as a key component of learning and retention. Visual literacy is the ability to read, interpret, and understand information presented in non-word form (Wileman, 1993). Visual literacy, supported by the use of visualization in teaching and instruction, ultimately achieves a greater degree of learning.

Using visualization approaches, coupled with a focus on increasing information understanding and analysis, extends visual literacy to cultivate visual data literacy; construct critical and higher-level thinking; encourage data-driven decision-making; and provide learners with a deeper degree of data fluency for analysis and communication. This chapter will provide examples for how to integrate information and visualization to develop data literacy, drawing from academic literature and case studies from practiced, interdisciplinary data visualization practitioners and educators.

Visual Learning Key to Data Literacy

Visual learning is a part of intrinsic human cognitive hardwiring as a learning, storytelling, and communication mechanism. The ability to visually learn from and consume information is a core construct of the deeply engrained visualizer-verbalizer hypothesis (wherein learning is a combination of verbal and visual elements) (Stokes, 2002). This is particularly relevant as an evolving understanding of the cognitive style construct continues to emerge with today's advances in multi-media and visual technologies (Stokes, 2002; Mayer & Massa, 2003).

Today, visual learning may be tipping the scales of this hypothesis in terms of both cognitive ability (human capabilities) and cognitive style (how people process and represent information by preference). One possible explanation could be attributed to the globalization of classroom education increasingly directed to both English-speaking and non-English-speaking audiences that reduces dependency on verbal instruction and increases visual methods of interactive learning to span language and cultural barriers. Another reason for the use of visualization is to compensate for a documented drop in vocabulary. Per Bleed's study (as cited in Penrose, 2006), it is estimated that the vocabulary of 14-year-old youth dropped from 25,000 words in 1950 to only 10,000 words in 1999 – a reduction in verbal lexis of 60%. Seeing and interacting with an image in combination with traditional written and verbal instruction, instead, has been associated with higher levels of retention and understanding of salient ideas. Moreover, visualization that blends information with influential features (like color, density, and content themes) significantly and consistently increases learning, memorability, and recall (Borkin et al., 2013).

With increasing technological competencies, the ability to place emphasis on visually-oriented approaches in learning has evolved from an information presentation mindset to the integration of interdisciplinary approaches designed to cultivate data literacy and critical thinking to support the needs of an increasingly data-dependent and analytical culture. Incorporating more visual elements into learning helps to foster interdependency between the two modes of thought, balancing verbal and visual learning (Stokes, 2002). This approach to learning complements previous research that has proposed multiple literacies are necessary to meet the challenges of society, including print, visual, aural, media, computer, and ecoliteracy (Kellner, 1998; Stokes, 2002).

Incorporating Data into Visual Learning

As the need to gather and examine data becomes increasingly critical across all verticals of industry, it brings alongside it a growing need to introduce and establish data literacy skills to build capabilities for understanding data (Brinkley, 2014). Building on the paradigm of visual literacy, various learning objectives for data literacy can be achieved by using data visualization tools, which typically include elements of design, statistics visualization, and communication. These all have benefits, including enabling students to think creatively and map conceptual and physical space; helping students examine changes and hypothesize reasons for change; and providing the ability to create persuasive visual representations to support arguments or recommendations (Hitchcock, Miller, Pontes, & Wieniek, 2014).

To achieve data literacy through visualization, visual learning should be extended to project data in a way that reduces complexity while capturing important information in a meaningful and memorable way (Fayaad, Grinstein, & Wierse, 2001). Many case studies in the literature, such as those by Godehardt (2009), provided the design, prototypic implementation, and evaluation of a framework for contextualized visualization as a learning support mechanism for ongoing, informal, and visually-supported learning. However, there are many practical examples of bringing data visualization into the classroom to foster data literacy, irrespective of subject, to appeal to a broader educational context. Two major approaches to visual data literacy have been proposed as extensions of visual literacy models (Stokes, 2002).

The first is to leverage visualization to read and decode to assist learners with various analytical techniques. The following example explores the use of visualization in teaching mathematics and statistics. While students have traditionally been taught to draw graphics to visualize mathematical information, the growth of user-friendly computing technologies has spurred a trend to teach statistical concepts using interactive data visualization tools (Forbes, Chapman, Harraway, Stirling, & Wild, 2014). Further, Moore (as cited in Forbes et al., 2014) made the case that pictorial vision is a prerequisite for the understanding of concepts of statistical inference. Putting this theory into practice, an enrichment program for high school students interested in a career in the science of mathematics was designed by researchers from the North Carolina General Assembly in partnership with JMP Software, an interactive software for desktop statistical discovery. As an experiment, this program was intended to expose students to data in a unique and exciting way by allowing them to engage with information and describe, visualize, and critique data sets from health care, education, and business. With a very limited focus on material covered in traditional mathematics curriculum, students were invited to explore data critically and visually to structure information for summary analysis (Brinkley, 2014). At the end of the program, students had developed a proven capacity to visually work with and understand data, as well as to understand the role of data in decision-making (Brinkley, 2014).

The second proposed method to visual data literacy is to encode visuals with data as communication tools. One type of visualization applicable under this concept is the infographic, which visually communicates complex quantitative and/or qualitative information through the combination of data displays, lists, graphics, and other data elements (including words) (Toth, 2013). Infographics have been shown to help highlight literacy concerns to teach students what information is valuable and how to use it effectively, especially in business courses. In one study, students were directed to design a meaningful infographic as part of the learning process. Results showed an increase in student engagement and a deeper understanding for the visual data design process, while the production approach of the infographic supported traditional pedagogical elements, such as writing proposals, performing research, and meeting citation and documentation requirements (Toth, 2013).

Special Considerations

The use of visualization to promote data literacy should be carefully planned. Applying the use of visualizations depends largely on the content and thus must be used in the appropriate context. While many forms of graphics exist, visualizations that incorporate illustrations and text (again, the verbalizer-visualizer hypothesis) depict patterns of concepts and ideas that serve as frameworks to promote learning, whereas those that steer learners toward exciting presentation can interfere (Stokes, 2002). This includes using visualization in photographs for realism, drawings, diagrams, or maps, as well as deciding when to use visualizations for effective visual support of data and information (Penrose, 2006). Additionally, Dwyer (as cited in Stokes, 2002) stated that visualization must be used within the educational context, as visualization alone does not maximize achievement.

When using data visualizations to support visual data literacy, instructors must highlight connections between visualization, design, and elements of science, and engage students in group critiques to explore and develop a position of personal insight and experience with data visualizations (Dykes, Keefe, Kindlmann, Munzer, & Joshi, 2010). As an intellectual endeavor, providing guided visualization examples has also been acknowledged as a catalyst for creative thought and problem-solving, as well as offers innovative pedagogical formats for teaching ethics and decision-making alongside complementary frameworks like Six Sigma, which involves the continuous and systematic use of data (Honey-Roses, Le Menestrel, Arenas, Rauschmayer, & Rode, 2013).

Conclusion

Using visualization as part of a suite of multiple intelligences can be used in the classroom to develop engaging assignments; increase critical thinking and intrapersonal competencies; and assess course outcomes—further strengthening visual literary. Paired with approaches that combine data and information, advanced data visualization will extend visual literacy to cultivate visual data literacy, providing learners with a deeper degree of data fluency for analysis and communication. To be successful, educators should possess skills that include the language of imagery and techniques for teaching visually to integrate visual data literacy as an exemplary educational practice (Stokes, 2002).

As academics align with the needs and demands of industry and corporations for emerging workers, visual literacy should be extended to include visual data literacy. As such, there is increased expectation to deliver graduates with enhanced knowledge and technical skills that leverage advanced visualization techniques for critical business competencies and data-driven decision-making (Hitchcock et al., 2014). This is driven by a progressively data-reliant and analytical business culture wherein workers are expected to use data visualization techniques to graphically see business data to clearly interpret meanings, patterns, and trends, as well as make decisions that affect the business, internal and external stakeholders, and society at large.

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14

A Kaleidoscope of Learning: Improving Student Engagement through Social Innovation

Ryan Gunhold

Abstract

The nature and face of the educational landscape continues to change, and one of the ongoing challenges remains—how to best integrate social technologies as a tool for engaging learners in meaningful ways. Additionally, with a growing population of Generation X and Y students, the traditional forms of learning in the classroom have taken a backseat to the more engaging means of online, community, and "social learning."

This chapter will discuss the emergence of social learning and will provide a list of innovative tools that can be used to improve student engagement, enhance instructional strategies, and encourage new learning heading into the future.

Technology Provides a View into the Future

Remember when it was once noted, "Isn't that new LMS great?" Or when the realization of online learning became a reality? Well, that future is now here, and key benefits abound. The ability to reach a global audience and to engage in using technology provides more avenues to success than ever before.

Many of the resources provided from schools now include technical choices that can be quite influential with instruction, but they can also be a hindrance if faculty and instructors are not well versed in how to use them. For example, faculty members at City University of Seattle work to provide learning success early on through the use of a progressive learning model, templated course shells, and a personal online learning environment where faculty can experiment with new learning strategies and have them critiqued by a faculty community. Furthermore, at a university where learning innovation is encouraged, faculty can have a dramatic impact on student engagement using many of these online learning tools, approaches, and strategies.

As faculty start using these dynamic learning tools, what does the future of learning look like? What key actions can faculty focus on to push the borders of what is possible to even greater heights? Social learning can help set the stage in learning environments to ensure the technical use of instruction is making a strong impact.

Why Have Social Technologies Become the New Wave of Learning?

There have been several evolutions that have happened in learning over the course of the past few decades. In Bersin's (2009) work, he showed an evolution of learning dating back to the 1980s and 1990s where society saw the rise of computer based training—one of the first forms of technology

integration using formal instruction. At the turn of the century, the e-learning era emerged with the rise of blended and informal learning making great advancements in academic and business realms (Bersin, 2009).

With so many technical advancements it has become harder than ever to determine a good prescription for knowing, "When is the right time to introduce new technologies?" In the classroom, instructors are focusing on improving ways to engage students in meaningful ways while encouraging the use of those new technologies—especially in a work world that is now demanding those components within an employee's learning plan. To take advantage of key technologies, Muthler (2015) prepared a list of simple social tools have had success for sharing and collaborating; classroom innovation; and organization and planning. Edudemic Staff (2015) shared examples of how to use social media as tools in the classroom. The following section will review some of these options.

Using Social Tools to Benefit Learning

Studies show that bringing social learning into the classroom can greatly improve academic achievement (Fewkes & McCabe, 2012). There is considerable evidence that shows that the learning continuum can greatly be enhanced using social learning when early, ongoing, and simple knowledge-sharing tools are established early in the course (Kabilan, Ahmad, & Abidin, 2010). Additionally, social learning allows for a greater depth of resources to be introduced into the course curriculum and for use with online instruction. Social learning also brings strong consideration for the workplace as it follows a global trend that uses social learning as a key component in helping to encourage knowledge and information sharing across organizations (Meister & Willyerd, 2010).

The following is a list of some social tools used within online learning environments or integrated into formal instruction:

- Integrated use of videos—use of videos during instruction or as an alternative to written and/or visual diagrams'
- SlideShare and other document sharing tools—use of templates and previous models of learning to create an improved framework of understanding for the learner and increased collaboration within a team or to share publically,

- Group collaboration on Skype and Google Hangouts—group sharing and activities are greatly improved through simple collaboration tools, and
- Community learning integration setting up a community to establish ongoing learning throughout a learning path or during the exploration of various business or learning processes.

These innovative social tools and the technologies that make up a new dynamic form of learning will be explored further in the following section along with considerations for the right time to introduce and implement them.

What Makes Social Learning Work?

Social learning works for many different types of students in the classroom. "Social media can bridge the diversity that exists in classrooms by establishing a neutral zone in which students can interact with one another" (Junco et al., 2011). One method that has worked for students is the inclusion of video into formal instruction. The use of video can be integrated into course resources as they are now used on learning management systems like BlackBoard or provided as an additional resource to post within Discussion Boards. Regardless of the use, the ability to demonstrate concepts, share animated demonstrations, or to inspire a class has been greatly enhanced through the creation of "playlists" that demonstrate learning through the eyes of the student.

Additionally, the use of SlideShare and other document-sharing tools have increased presentation sharing in their ease of use, their capacity to share knowledge across the web, and their ability to remove security barriers that might arise due to conflicting technologies. The ability of students to share resources has hit an all-time high, evident in a recent Social Network Analysis Report which noted the increase of users (60 million) are concentrated to college-level students (Chappel, 2012).

Having teams online, more students are doing "meetups" by way of Skype or Google Hangouts. There are other tools available to accomplish this task, but due to the low cost (free) for the basic use of these products, it makes for faster adoption along with its integrated use in other social platforms (Skype with Facebook, and Hangouts with Google +).

Finally, though students are asked to use technology to retrieve and look for additional references, and to create project based work, perhaps the most overlooked aspect of social learning is the use of community groups. Some of the most popular ones can be found within social platforms, such as *LinkedIn Groups* or *Yammer Groups*, and can serve to gain critical "insider knowledge" through experienced professionals already in the field. Students who are actively involved in community groups have a far greater grasp of the professional knowledge needed to be successful in the field and continue to practice collaboration even in their own learning process (Hurt et al., 2012).

Challenges with Social Learning Use

Instructors would benefit from becoming familiar with social tools available. One of the reasons social learning integration can fail is that the instructor does not provide the right resources or encouragement necessary to support student usage and learning (Väljataga & Fiedler, 2009). Simply exploring these tools during a course will not likely help students; rather, instructors should be well-versed in how and when to best use these tools. Other studies have shown that social media can provide too much stimulation and therefore can distract students from completing their coursework (Hurt et al., 2012). Therefore, it is important to model the use of these tools during instruction and provide adequate class time for students to explore and better understand the advantage of using these tools.

Conclusion

There are many technology tools that can be used to enhance the learning experience, but few have shown the level of impact as the use of social learning tools, many of which are described in this chapter. In online instruction and formal coursework, it helps when groups are moving and learning together through processes, and the use of these tools helps to integrate improved instructional experiences and provide new approaches that are emerging through all communities across the globe.

In essence, social learning moves instruction into the new classroom of the future—"The Learning Cloud." On that journey, using these basic social tools will help students to be more engaged in the course, add greater relevance to instruction, and better prepare students for the new learning environments of the future.

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15

Ubiquitous Knowledge is Changing Our Pedagogy

Craig Schieber

Abstract

Over 50 years ago, Marshall McLuhan stated, "the medium is the message" (McLuhan, 1964). McLuhan's point was that the particular technology used to communicate a message will impact the content of that message. As teachers integrate technological tools into their teaching, so their pedagogy must adapt. In this chapter some constructs will be presented that can be used as tools to analyze new technological applications in relation to the content of a class to maximize student learning. Three main categories of information technologies are reviewed: reflective, collaborative, and social interactive.

Ubiquitous Knowledge is Changing Our Pedagogy

Almost 50 years ago, Marshall McLuhan stated, "the medium is the message" (McLuhan, 1964). McLuhan's point was that the particular technology used to communicate a message will impact the content of that message. Put another way, the tools used for construction influences what can be built. For example, reinforced concrete allows skyscrapers reaching over a quarter mile into the sky to be built. As teachers integrate technological tools into their teaching, so their pedagogy must adapt. In this chapter, some constructs will be presented that can be used as tools to analyze new technological applications in relation to the content of a class to maximize student learning.

Background

To help understand the context of using these analytic tools it is useful to review several historical examples of similar instructional adjustments that were made in teaching when a new technology was brought into the classroom. The technology of printed books and eventually easy access from voluminous libraries required students to know how to reference authors and ideas presented from many countries and historical eras. With these advancements came a stronger focus on how well students manipulated and synthesized information. It wasn't that this kind of thinking did not exist before the technological advance, but the advance made the use and mastery of such skills a more dominant standard of achievement (McLuhan, 1961).

The amount and nature of technological advancements in this era have launched education into a revolutionary stage (Christensen, Johnson, & Horn, 2008). Educators are challenged with how to integrate new technologies into the learning process. Technologies, such as lecture capture, Google docs, discussion boards, Skyping, among many others, can be used in a traditional lecture-style classroom to little additional benefit; alternatively new pedagogies matching the information technology revolution can be created to maximize the potential of these technologies. Figuring out what the instructional strategies are that are driven by these new technologies is where the challenge lies. Instructors need to analyze their practice and adapt pedagogical strategies to integrate new technologies into their instruction.

An example is the difference between a classroom in which a blackboard (with chalk) is used and a second classroom in which PowerPoint is used. Using a blackboard, the instructor usually writes on the board as the lecture proceeds, students take notes, and the board is erased at the end of the lesson. Whereas, a PowerPoint is prepared ahead of time, students can make notes on a handout of the slides or on their own laptop, the PowerPoint is shared with the students electronically, and it is preserved beyond the classroom.

In a classroom with a PowerPoint lesson, the instructor could just write the same materials on the PowerPoint as on a blackboard. However, if the instructor knows how to take advantage of the components of PowerPoint, there could be graphics, movement on the screen, links to related sources including video clips, and questions to check for understanding. Students can listen to the presentation live in class, review it at home off a home computer, take time to look at some of the added links the instructor did not play in class, and email the instructor with questions they may have about the content. Time spent in class the next day may best be used working with other students discussing the different resources accessed the previous night about the subject. Students will share the varied information they have gathered and delve into high-level questions about the topic. The instructor will move about the classroom, engaging with students on the particular conversations they are pursuing (Sams & Bergman, 2012). This process, developed in the high-tech era, more closely reflects a knowledge-creation industry model process. While none of the practices used in the PowerPoint example are inherent to using PowerPoint as an instructional tool, using these study and thinking skills becomes easier, more natural, and more necessary in an effective classroom of the information age.

There are three foundational uses of information technologies to be brought into the classroom. Instructors can analyze their curriculum and instruction in relation to these functions of technology and make corresponding changes in their pedagogy to take greatest advantage of these tools of the information age.

The Process

Information technologies can be put into the three different functions they serve in knowledge work. These three groups are

- reflective—the ability to replay and rethink;
- collaborative—group work on tasks; and
- social Interactive—utilizing a forum for exchanging ideas.

Reflective

Reflective technologies allow for the storage, retrieval, and manipulation of information. The traditional 20th century classroom had two major sources of information, the professor in front of the room and the textbook that the professor chose. The professor's information could only be accessed during the class lecture or through student notes after the lecture. Today, technology has increased the ease with which students can access information and the number of sources that can be utilized. Lectures can be recorded as podcasts or videos for later replaying and reflection by the user. Information, be it a lecture, textbook, or video, can now best be categorized as learning objects. Learning objects have proliferated on the internet, which is open for business any time of the day. Learning objects can also be posted by anyone who wishes to post information. As a result, learning objects are now ubiquitous. Thinking of information in this light allows users to choose a format similar to their learning style but also requires attention to evaluating the quality of the source of information.

Multiple sources of information are the norm for learning in our society. Students must use analytic skills to evaluate the validity of information sources. Using multiple sources and examining multiple viewpoints requires the ability to synthesize information. Instructors must be open to accepting that similar concepts can be learned through reading a textbook, listening to a podcast, or watching a video. Given that there is now this abundance of information informing instruction, assignments should be designed to allow students to take advantage of these multiple sources.

When instructors record their lectures, not only can students replay these at home but the classroom utilization can be changed to take advantage of this technology. During class time some students may be assigned

to watch the lecture while the instructor works individually with other students. After a while the groups in class can switch activities. Instructor time attending to individual student needs is increased in this manner. The flipped classroom movement has been most noted for developing these new techniques for taking advantage of reflective technologies (Sams & Bergman, 2012).

The manipulation of information with technology is seen in tools such as electronic spreadsheets, computer simulations, and automated feedback systems. Content taught in classrooms has changed due to the new knowledge and skills generated with these tools. For example, the growth in the field of discrete mathematics has been accelerated by computational tools and is now used in so many industries that, today, discrete mathematics is introduced as part of the math curriculum in the elementary grades (DeBellis & Rosenstein, 2004). Students in statistical analysis classes now spend the majority of their time learning how to enter data into complex statistical spreadsheets and programs, and then how to analyze data generated from these applications rather than the memorization of formulas and number-crunching processes taught just 30 or 40 years ago. The spell-checking function on word processing has thrown into question what level of mastery spelling of words should receive in the curriculum. The increased ability to use data analytics in the programming of instruction is leading to the proliferation of adaptive learning technologies used in all aspects of the learning process. Clearly, all of these technological advances have changed both what is taught in the classroom as well as how it is taught.

Collaborative

Collaborative tools allow for multiple users to work on one project synchronously or asynchronously. In this information age, knowledge workers spend much of their time collaborating (Rosen, 2009). Shared document applications are used more often in the workplace and hence are showing up as classroom expectations as well. Google docs and wikis are examples of applications that allow many users to contribute to one document all at the same time. This ability to effectively work with others on one document at the same time requires high-level group work and people skills. Instructors should be conscious to teach about additional

thinking and group work skills as they have students working on these kinds of collaborative assignments.

Another use for collaborative applications can be to collect the outcomes from breakout groups. Rather than collecting information from each group on flip charts, the information can be added to one document by all the groups at the same time. The document can be projected on a screen for all to see as it is being created. The use of collaborative applications is sure to be developed far more in the coming years, and instructors can advance group activities by utilizing these technologies.

Social Interactive

While the reflective applications of technology tend to decrease focus on human interaction, the collaborative applications increase the need for effective human interaction. Perhaps it is appropriate that the third category of technology applications for education focuses on social interactions.

The process of learning information usually involves some aspect of the learner discussing the information with others to better understand it and put it to memory. Traditionally, these types of educational discussions might happen in a classroom between professor and students or between students. The advent of online learning has advanced how learners accomplish this social interaction. Online discussion boards are one tool used to accomplish this social interaction. However, in many instances, first uses of discussion boards have tended to be very stilted and do not mirror the natural give and take of a face-to-face conversation. Outside of the classroom, the use of Facebook has been quite captivating for many people who might not connect with discussion boards. Elements of Facebook formatting of interactions can be brought into the online classroom to enliven discussion boards.

Another tactic for increasing effectiveness of social interaction applications may be to adapt the way interactions are posed. Instead of posing a question, students are given a relevant activity in which to engage. The instructor poses himself in the multiple roles and the students work their way through the activity. The level of student participation in this model increases dramatically. The questions and the tasks posed for online social interaction applications need to be different to activate student interaction. As in the other applications being used in the information age, to be effective social interactions online must include some upper levels of Bloom's Taxonomy thinking.

Conclusion

Just as McLuhan stated, "the medium is the message," (McLuhan, 1964), knowledge tools of the information age are shifting the tasks performed in personal lives and at work. As such, the skills of manipulating technology should mirror the skills of the knowledge worker in our world filled with ubiquitous knowledge. Evaluating the content of any class in regard to how these skills are treated with the technology applications in the three main areas of reflection, collaboration, and social interaction should lead to new and more effective pedagogy for the information age.

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16

Developing Reflective Practice and Trans-disciplinary Knowledge in a Cross-cultural Learning Environment Using CAPSIM

Marie Kavanagh and Jean Ann French

Abstract

This paper explains the use of a specific computer-based simulation program, CAPSIM, as an experiential learning model to embed the development of reflective practice and the application of trans-disciplinary knowledge to solve complex business problems. The learning environment involved teams of students from different cultural backgrounds from two

separate universities enrolled in a common management course. Findings indicate that opportunity presented by the simulated business program to reflect, assess, and arrive at decisions can challenge assumptions and beliefs about process and practice. Further, the environment stimulates motivation and results in deeper learning not only about the concepts and materials being studied but also enables individual learners to grow personally. Cultural approaches and mode of engagement are also highlighted as variables of interest.

Developing Reflective Practice and Trans-disciplinary Knowledge

Experiential learning is the process of learning through experience and is more specifically defined as "learning through reflection on doing." It is distinct from rote or didactic learning or push learning in which the learner plays a comparatively passive role. It aligns with the principles of learning analytics that allow the measurement, collection, analysis, and reporting of data about learners and their contexts for purposes of understanding and optimizing learning and the environments in which it occurs (Chatti et al., 2014).

Learning that is considered "experiential" contains the following elements: reflection, critical analysis, and synthesis; opportunities for students to take initiative, make decisions, and be accountable for the results; opportunities for students to engage intellectually, creatively, emotionally, socially, physically, and, more importantly, culturally; and a designed learning experience that includes the possibility to learn from natural consequences, mistakes, and successes.

To best prepare students for a complex and rapidly changing professional environment, the exemplar described in this paper provided teams of students from two separate universities in the United States and Australia with an opportunity to engage in a capstone management course that incorporated a business simulation assessment using CAPSIM. CAPSIM is an interactive online program that affords students the chance to apply what they've learned across all disciplines of business by running a company of their own for five years (five competition rounds). The student management teams are the decision makers who must balance competing needs and demands and understand how the individual parts of the business impact the entire organization in a competitive marketplace. Each student management team is assigned $40M to run its own company. Students work in teams of up to five to decide how they will assign roles, develop assumptions, and implement business decisions involving product portfolio, pricing and cost management, sales mix and marketing, financing, risk management, and ethical practice—all underpinned by the desire to be profitable and manage cash flows.

The simulation is run as a competition with teams able to view the results of others including computer teams provided by CAPSIM for benchmarking purposes. Students reflect on their actions, learn from mistakes, and take appropriate action to improve the outcome for their company in each round. Students get the "experience without the real-world risk" (CAPSIM, n.d.). This allows them to develop a trans-disciplinary contextual appreciation of business beyond their immediate academic environment, reflect by doing, and learn from mistakes to build confidence so they are better prepared to step into a business career.

This paper proceeds to explain how the initiative in this course (a) contributes to research in the area of experiential learning; (b) provides a strategic, competitive, engaging learning experience for students; and (c) encourages the development of reflective practice in students to link trans-disciplinary knowledge in a cross-cultural business environment.

Developing Essential Skills Using Business Simulations

According to Armer (2011), "practice makes perfect," but finding a way to allow students to attain some level of proficiency in business or management without actually being in a business is difficult. By incorporating the CAPSIM simulation into the course, students work in teams and are challenged to apply their business skills and knowledge and to see firsthand the cross-functional impacts of their decisions in a replicated real-life business scenario. Nkhoma et al. (2014) suggested that real-time continuous feedback given during the simulation makes the learning process and engagement with the course more enjoyable. Further, it empowers students to apply a hands-on approach to make informed change by reflecting on what they did (both individually and as a team) and what happened to find better solutions to the problems being presented in the

next round. Argyris and Schon (1996) coined the term "double-loop learning" to refer to this process.

Good course design usually starts with clear high-level learning objectives (Whetton, 2007). In this course, skills in teamwork and reflective practice are key learning objectives. Ramsey (2005) linked the two skills together when discussing the narrative learning cycle. In this form of reflective practice, multiple voices share their experiences, resulting in a jointly created learning journey and leading to learning in performance. Embedding the CAPSIM business simulation activity into the course ensures the development of both teamwork and reflective practice skills in a cross-functional business arena.

Hedberg (2009) suggested that when reflective inquiry is to drive learning, the reflective learning objective or focus must be defined upfront and offered three choices: subject, personal, and critical. Reflection that results in subject learning gives students insights into the subject matter concepts, theories, or frameworks and answers the question, "What am I learning about the subject being studied?" Personal reflective learning builds on the importance of self-understanding and self-awareness to provide insight about how individual beliefs and assumptions influence approach to the subject and affect behaviors. It answers the question, "What am I learning about myself as I learn about the subject?" Critical reflection encourages students to actively participate in what they learn, grappling with questions of meaning and power (Freire, 1985) and questioning assumptions, beliefs, and critically accepted wisdom.

In the management learning space Morgan (2009) agreed that the benefits of reflective practice are threefold: The first is to re-define the understanding of professional knowledge; the second to develop personal self-awareness; and the third is to evaluate the appropriateness of actions. Understanding how to engage in reflective practice requires rigorous and active thought and training so that reflection can add to management learning (Mintzberg, 2004). Developing a reflective capacity amongst learners through a carefully chosen and designed reflective learning application is key within the capstone unit.

Students are encouraged to adopt a holistic cross-disciplinary perspective to their learning to develop subject and professional knowledge, personal self-awareness, and social awareness of the implications of their decisions and actions. The simulation exercise removes students from their norm—provoking them, inducing them to employ many aspects of their business knowledge to make decisions that will ensure profitable outcomes for their company. They take risks and make mistakes, all with "real" consequences. In doing so, students have an opportunity to visualize business in different ways and facilitate the integration of their learning across disciplines in their degree program.

Anderson (2005) suggested that in many business courses computer-based simulations are becoming a popular pedagogical technique but there has not been a great deal of research about how these simulation games impact student outcomes. The exemplar developed in this course allows students to build individual skills in reflective practice and cultural diversity as they examine team dynamics and simulation performance as part of their learning journey. Results showed that the outcome of the simulation game was influenced by team cohesion, which was affected by mode of operation, differing perceptions due to cultural background and extent of experience in business, and level of emotional intelligence.

Embedding Simulations into a Course

Anderson (2005) suggested that instructors should thoughtfully consider the learning objectives and outcomes they want students to experience when structuring student teams to participate in simulated learning using technology such as CAPSIM. Pavlovich, Collins, and Jones (2009) emphasized that developing reflective practice in students is about course design and assessment. Teamwork, especially cross-disciplinary learning, is the key to the simulation experience as these skills evolve over the life of the case study. Students are expected to engage and reflect with other team members in a cross-disciplinary case study environment and are assessed on their results. For that reason, embedding simulation activities and assessments such as CAPSIM into a capstone course is appropriate as students are able to apply knowledge and skills learned throughout their degree program as they engage. In addition, the team interaction involved in this project-based learning experience prepares students for the real-world dynamics of the workplace and, in this instance, the global workplace.

The online nature of the activity allows teams to choose how they engage and collaborate. What influenced the outcome was the composition of the team in terms of cultural backgrounds because of differing

cultural perceptions. This would seem to support the finding by Khalsa (2010) who suggested that online learning teams have generated attention to the social and cultural characteristics that influence global interactions.

Tips for Success

Doyle and Brown (2000) documented the benefits and challenges of using a business simulation to teach applied skills involving student teams from multiple countries in different locations. Even without the complication of teams from different countries there are several important factors to be considered when embedding online simulations into courses.

- Identify learning goals upfront and ensure that the key skills to be developed are embedded in activities and able to be showcased through assessment.
- Compare and contrast the teaching materials currently available to assist in project-based learning activity and realign materials where necessary.
- Effectively identify and train faculty and staff on the fundamental steps necessary to launch and execute project-based learning, especially business simulated project-based learning.
- Garner sufficient technical and IT support at each site. A key focus is the effective use of IT resources to support instruction and learning outcomes.
- Give consideration to how teams are formed bearing in mind location, team collaboration, and cultural differences and backgrounds.
- Ensure an engaged game administrator is available to compile decisions and disseminate results to participants. Understand how to guide students through cultural, strategic, and organizational issues.
- Provide teaching and training to allow students to understand the value of reflection and reflective practice to move to a deeper level of understanding.

Conclusion

Similar to Doyle and Brown (2000), this experiment found strong support for experiential learning/teaching strategies that actively involve students in the process especially when those strategies accurately simulate the skills to be learned. A student commented, "Learning that inclusiveness and building of ideas and actions in steps, not jumping to solutions, was the most valuable aspect." Further, the diversity created by using teams from different cultures allowed each to see differing motivations and approaches, broadening the learning experience.

Lang and McNaught (2013) reiterated that capstone subjects that link students approaching graduation with significant experiential learning and relevant industry placements have the potential to be very valuable to students. This is particularly evident if they are able to critically reflect on the experience. The comments of one student seemed to sum up the outcome: "normally team projects are a real chore to complete, but the CAPSIM simulation was very interesting and rewarding both personally and for the team…seeing Digby (their company) really take off made us feel accomplished with our effort."

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