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CONTENTS

- **Editor's Note**, p. 3.
- **Flipping the Flipped Classroom: The Beauty of Spontaneous and Instantaneous Close Reading**, Haerin Shin, Vanderbilt University, Assistant Professor of English, Asian Studies, and Cinema & Media Arts, p. 1. What if the first and second steps in learning could be brought into the classroom with a teacher at hand?
- **FIELD REPORT: Benefits (some unexpected) of Transparently Designed Assignments**, Mary-Ann Winkelman, David E. Copeland, Ed Jorgensen, Alison Sloat, Anna Smedley, Peter Pizor, Katharine Johnson, and Sharon Jalene, University of Nevada, Las Vegas, p. 4. When a group of faculty take a fresh look at the purpose, task, and assessment criteria for a few of their assignments, lots of fresh insight into good teaching follows.
- **TECHPED: Let's Welcome the Graduate Assistant to the Online Village!** Michael L. Rodgers, Southeast Missouri State University, p. 7. Online graduate assistants need coaching in good teaching. Maybe some of that can be put online where and when they need it.
- **INNOVATION: Digital Badges to Assess Bloom's Affective Domain**, Heidi E. Parker, Purdue University, p. 9. Perhaps marking sufficient progress may replace grades in some online learning. Digital badges may be their mark.
- **AD REM . . . : The Goldilocks Principle: "Just Right" and Beyond**, Marilla Svinicki, University of Texas at Austin, p. 11. When major principles of learning seem at odds, how do you sort them out?

Flipping the Flipped Classroom: The Beauty of Spontaneous and Instantaneous Close Reading

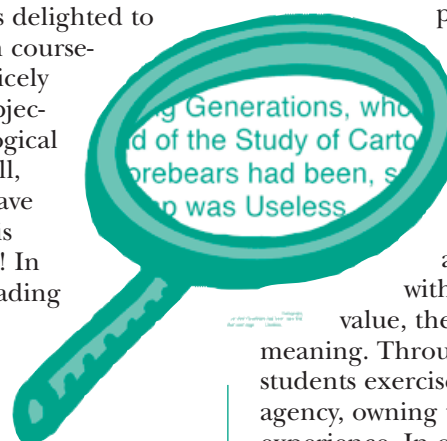
Haerin Shin
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■ first came across the concept of the "flipped classroom" a few years ago, while sifting through articles on on- and offline hybrid courses—articles about minimizing prescriptive learning on site and helping the students make the best of their shared physical presence in the classroom, emphasis on live interaction, etc. I was delighted to notice that my own course-work experience nicely aligned with the objectives of this pedagogical innovation. After all, literary seminars have been exercising this approach all along! In particular, close reading is a wonderful way to create a convergence effect, reconfiguring the discrete threads of the critical thinking that students (hopefully) brought back from home into a constellation of understanding. Individual stars of insight sit in the sky as luminous yet isolated entities, but when a community draws connections among them, curates their alignment, and endows the

resultant observation with a shape and story, new meanings are born.

Parting Clouds

As Kant asserted, the appreciation of beauty hinges upon both the subjective and the universal. Classrooms are none other than the generative site where the universal dimension of literature—as not only subjective representation and reflection but also the source of timeless inspiration, a work of art—is established through processed-based collaborations, whereby the written, spoken, and drawn "become," rather than simply "are revealed to be" as a fixed object with any preordained value, the seedbed of new meaning. Through close reading, students exercise and realize their agency, owning their learning experience. In other words, they read the assigned materials, walk into class with thoughts and questions, and bring on the magic of dialogic engagement by unpacking the mysteries of word-craft right then and there. One student picks up the nuanced tone of a certain passage and detects layered ironies that point to a rich cache of social

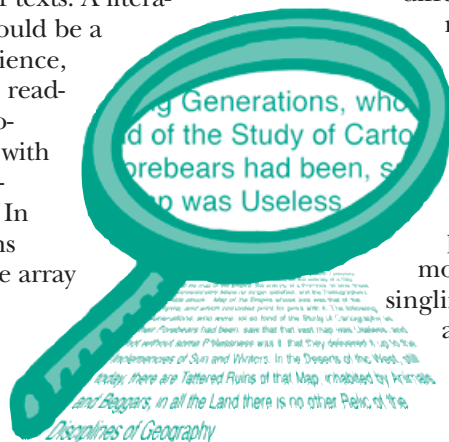


critique, while another directs our attention to the architectonic intricacies of the sentence or identifies cultural markers that eluded the class's notice, illuminating the discursive and aesthetic appeal of stylized double entendre. Reading becomes making, and consumption, production. The marvels of making the stars fall into place in front of their eyes, the beauty of spontaneity paired with instantaneity arising from what I see as the central tenet of the flipped classroom model: shared temporal, spatial (whether physical or virtual, considering the growing appeal of digitally remediated classroom experience), and cognitive presence.

Our Practice—New Practice

Too Long—Too Short. The discovery that one of the most innovative approaches in contemporary pedagogy is already an embedded practice in my discipline was a heartening one, but the need for further fine-tuning emerged when I began to notice subtle differences in the classroom dynamics as we marched through a variety of texts. A literature class is and should be a multifaceted experience, one that cannot be readily reduced to a two-dimensional plane with lectures and discussions on each side. In turn, the discussions should foster a wide array of abilities, such as the ability to distill and abstract, but also to effectively support these ideas by feeling out the contours of the text, which can be achieved through close reading. However, the particularities of the genre, medium, and form each class revolves around appeared to result in a “weighted average” (rather than a properly distributed) model. For instance, poetry classes were more conducive to on-site close reading due to the (not always, but often) shorter and more condensed form

in which the content is presented, whereas the bulk and scope of a prose-centered class tended to migrate towards an open forum of ideas with less opportunities for intense close reading. As a fan of student-initiated class flows, and given my own research and teaching focus on prose fiction and critical theory (which involves reading and discussing a good number of long novels that go over 300 pages), I wanted to find a way for our class members to exercise the wonders of close reading in a more holistic and organic fashion instead of getting piecemeal exposure. The problem persists even with short stories, ironically, as Poe pointed out in “The Philosophy of Composition,” the “unity of effect” is a desired goal precisely because of the challenges posed by “length.” A short story can be read together in one sitting, but doing so would leave little or no time for students to collaboratively engage in the making of its meaning. In turn, asking them to read the story beforehand and discuss it in class results in a dynamic that is hardly



different from novel reading, since even “short” stories comprise multiple paragraphs and pages, inevitably reverting back to the piecemeal analysis model. Instead of singling out paragraphs and passages and subjecting them to rigorous analyses, while letting the rest of the reading play into the discussion as readily available yet unrealized sites for detailed appreciation, wouldn’t there be a way to help students see their joint effort transforming the text as a whole? How to fully capitalize on the temporal continuity and spatial proximity we experience in one class sitting, to “enact” the structural practice of reading prose (namely, creating an organic synergy between part and whole) by

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May

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Editor's Note:

Las Vegas was unexpected in many ways. For one thing, the dominant image—"the strip"—doesn't really offer a very honest view of the city. In my residency at UNLV, I found there's much more to Las Vegas, especially at the university. Recent issues have introduced readers to the Transparency Project, led at UNLV by new member of *NTLF's* Editorial Advisory Board, **Mary-Ann Winkelmas**. The project seems so important to pressing goals of higher education across the board and seems to be showing such success in meeting those goals, that I asked Mary-Ann to give the *FORUM* a deeper look into faculty's experience working with its template for redesigning assignments to make them more transparent. With the help of a group at UNLV, she's done that. You'll find that **FIELD REPORT** within.

Surprises often lead to new, fresh learning as well as, dare I say it, fun. I got another such surprise at Vanderbilt, the residency that followed my stay at UNLV. The Center for Teaching's Director Derek Bruff was sharing a joke with me about what a "flipped" class in literature would look like: students would come to class and sit and read the book. I laughed because as a literature major I'd had skeptical feelings about all this "flipping." We'd always read ahead of time and come to class to discuss; what was the big deal about that? (Rest easy, I've gotten a better understanding of what it's all about since.) I did think the joke was funny, but when I shared it with **Haerin Shin**, a brilliant young member of Vanderbilt's English Department, I got one of those surprises I'm talking about. "Yes," she said, "I've done that." The conversation that followed led to her writing this issue's lead feature on "Flipping the Flipped Classroom." The length of a lot of literature precludes first reading and discussing in the same hour, but what's possible with a short work exposes the dynamic possibilities of moving the experiences, the stages of learning closer together, something faculty in other areas might want to look for ways to achieve.

There's always a "flip" side to everything we do in education: take technology for example. On the one hand it makes "information" available to many more people/students at the same time and they don't have to show up, sit down, and listen to a faculty member to get it. On the other hand, we know that "information" by itself doesn't constitute "knowledge," and that the processes of teaching and learning draw assistance from a teacher somewhere along the line. (Or at least we like to think so.) What happens when a faculty member finds himself conducting a large, online course assisted by a cadre of graduate assistants who don't have face-to-face meetings with students and perhaps fewer staff meetings with him? In a way online instruction ends up calling for more individualized student attention which in turn requires more teaching experience to know the best kind of responses to give than most graduate assistants have. **Mike Rodgers' TECHPED** in this issue explores this problem and offers sage counsel.

And of course in all formal teaching, there's the problem of grading. Or is it a problem? Perhaps "digital badges" offer an alternative for some aspects of online learning. In this issue's **INNOVATION** column **Heidi Parker** of Purdue University explores the application of digital badges to learning the "soft skills" outlined in Bloom's taxonomy of the affective domain.

Finally, **Marilla Svinicki's AD REM . . .** sorts out some contradictions in basic principles of learning. Should questions be "just right" or "too hot"? Read Marilla's article and find out.

— James Rhem

placing an individual class period into dialogue with the semester-long journey of the course?

The Flipped Flip

What I realized upon facing this challenge, was that I had to further flip my own perspective regarding the "what" of close reading in order to maximize the effects of the "how." The conundrum of negotiating performative spontaneity/instantaneity with the disproportionately large volume of its object of engagement could be resolved by recalibrating my preconception of prose fiction. Put simply, I had to present the students with something short enough for thorough interrogation in one sitting, yet complex and multifaceted enough for layered discoveries, with sufficient architectural coherence to ensure the procedural joy of building a perspectival framework. Perhaps a paragraph-long story that serves as a seedling for a cosmos of its own.

"There is nothing more rewarding for me, as a teacher of literature, than catalyzing and witnessing the birth of meaning and an appreciation for the beauty of its process, the craft of its embodiment."

Enter Borges. Fortunately, there was a text that handsomely fit the bill: Jorge Luis Borges's "On Exactitude in Science." Composed of 155 words, "On Exactitude in Science" (in English translation) is of a length that warrants the modifier "short" even within the category of

flash fiction. At the same time, its content runs wide and deep, every single sentence packed with references to and commentaries on historical, cultural, socioeconomic, and political issues that resonate with our lives past, present, and future. A map of an Empire, the precision and exactitude of which becomes so overwhelming that the terrains become covered in its fold, only to be reduced to “tattered ruins ... in all the Land there is no other Relic of the Disciplines of Geography.” Following the dense prose word by word, the students pondered on the effect of each semicolon, the artful diction that invites rigorous scrutiny, and the flow of the sentences as they unfurled the process by which representation takes over the real and becomes a thing of its own. One student investigated the author’s word choice of Empire (why choose the word Empire instead of something more neutral such as land or country?) and remarked upon the subtext of power and control, as well as the impression of spatial vastness embedded within the term. Another student connected these elements back to the gradual expansion of the map and sketched out the progress of Imperialism powered

Submissions

The *Forum* encourages submissions on any aspect of college teaching and learning. The ideal article falls within a 1,500 word limit and, following Thomas Sprat’s praise of the Royal Society, holds to a style of writing that reflects a “close, naked, natural way of speaking.”

Normally, articles come from faculty, but other voices, including student voices, are welcome.

Also, the symbiosis between our printed edition and our website creates rich opportunities for posting ancillary materials to accompany submissions.

Submit manuscripts to James Rhem at 213 Potter Street, Madison, WI 53715 or via email at jrh@chorus.net.

by the science and technology of institutionalized intellectual disciplines delivered (“Cartography,” “Geography”...), while yet others called attention to the inhabitants of the map’s ruined relics (“Animals and Beggars”) and questioned the framing of the tale (presented as a quotation, the source of which is but a fabrication), coalescing the discussion towards a poignant critique of modernity and the legacies of Enlightenment. Having spent a full fifty minute period over this one paragraph of a story, one student later reflected that it was one of the most intense and revelatory experiences throughout the term. She was proud and happy to have made something of the given text on her own terms, or rather, on “shared ground” through which she not only exercised her own agency but also realized the power of collaborative, dialectic thinking. I can, meanwhile, confidently state that I myself was probably one of the greatest beneficiaries. There is nothing more rewarding for me, as a teacher of literature, than catalyzing and witnessing the birth of meaning and an appreciation for the beauty of its process, the craft of its embodiment.

The Next Flip?

Teaching has always been a learning experience for me. Likewise, theory and practice go hand in hand, each supplementing and enriching the other. What I learned by “flipping” the “flipped classroom” model with this particular experience, which I hope to carry over to more classes to follow, is that there is always more room for further conceptual, and perspectival flipping in the interactive and dynamic process of teaching and learning. ■■■

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FIELD REPORT

Benefits (some unexpected) of Transparently Designed Assignments

Mary-Ann Winkelmes, David E. Copeland, Ed Jorgensen, Alison Sloat, Anna Smedley, Peter Pizor, Katharine Johnson, and Sharon Jalene
University of Nevada, Las Vegas

Editor’s Note: We wrote about the Transparency Project in the February issue of NTLF V24N2 and readers can find out more about it and how to participate at <http://www.unlv.edu/provost/transparency-signup>. Participation—just reworking a few assignments to make their purpose clearer to students, especially historically underserved students—can be a transformative experience for faculty. A group at UNLV who participated got together to talk about their experience. Here’s a report on what they had to say.

College students in large, introductory, gateway courses often struggle to succeed. Only 67.6% of college freshmen return for the sophomore year.¹ Some of students arrive at college already familiar with typical course work, expectations, and grading practices. Others do not, and these students face an immediate and unnecessary barrier to their progress. Expectations aren’t transparent to this group. At the University of Nevada, Las Vegas (UNLV), a group of faculty and instructors teaching large, introductory courses resolved to remove this obstacle. They agreed to redesign two graded assignments and two ungraded class activities to make them more transparent to students. They discussed and explored the (a) purpose, (b) task, and (c) criteria for each of these assignments and activities with their students. Using the Transparency in Teaching and Learning

Project's framework² for designing assignments, they explicated the **knowledge** students would gain, the **skills** they would practice, the **steps** they would follow, and the **criteria** by which their work would be judged—all before students began to work. Why? The Transparency Project has found significant benefits to students' learning—especially the learning among under-served students in intro-level courses that include transparently designed assignments.³

And so to help, faculty also provided students annotated examples of successfully completed past assignments. The UNLV cohort's observations here shed light on specific aspects of what those benefits look like in practice with their students.

Some Approaches

The UNLV group hoped that transparently designed assignments would resolve a variety of challenges to students' success. Many of their students are venturing into an academic discipline for the first time, where both the content and the processes of thinking about it seem unfamiliar. Anna Smedley, from Sociology, wanted to help students apply new tools to thinking about the social world: "I did not want unclear processes or instructions to stand in the way of their sociological imagination." Her extensive revision to a SOC 101 paper assignment, "Understanding Cultural Diversity," now crystallizes the purpose, task, and criteria for success, and then offers students a set of background sources. An earlier version of the assignment had described the students' entire task in chronological order, pre-

sending them with the background material first. This had seemed the more logical approach to a team of instructors who were inventing this new course, but it had confused students.⁴

Alison Sloat, who teaches an introductory Science 101 course, explains, "I wanted to help all of my students, particularly those who perform poorly, despite attending class and completing assignments." Her revised assignment maintains the original sequence of ques-

tions, and appends an introductory statement about the assignment's learning goals and a concluding set of grading criteria. Even these relatively minor changes have resulted in higher quality work from the students responding to this version of the assignment.⁵

A Boost to Motivation

Instructors in the group also saw new opportunities to motivate students' efforts in their introductory courses. "Computer Science can be a daunting discipline for beginning students; not fully comprehending the purpose and expectations for difficult assignments can be demotivating for many of them," explains Ed Jorgensen. "But these students are driven and engaged when they find meaning in their coursework; considering *why* and *how* they are learning the content can help them discover a meaning that resonates," says Katharine Johnson of her students in an introductory course for exploring Liberal Arts majors.

Expected Benefits

Some of the positive outcomes for students in these instructors'

courses seem evident and expected. For example, resistance from students who viewed assignments as "pointless" has virtually disappeared. The quality of students' work submitted in response to the redesigned assignments has improved. The number of questions (especially frantic, last-minute ones) about assignments has decreased, and those that remain are usually thoughtful questions that lead to useful conversations.

Unexpected Ones

The UNLV teachers have also noticed some welcome if unexpected benefits. "It's easier to grade the students' assignments because the expectations are clearer," explains Katharine Johnson of students' work for her introductory course for students who are exploring the social science major. Ed Jorgensen notes that his computer science students this term have "higher completion rates for all their assignments, even the most difficult ones." He hopes this will lead to higher course completion rates.

Additional unexpected benefits have begun to accrue directly to the UNLV faculty themselves. Some say that designing more transparent activities and assignments affects how they teach in the classroom (online and onsite). "I explain assignments better, because my own clarity on their purposes, tasks and criteria is improved," says Johnson.

The effects on teaching extend beyond the explication of assignments. For example, Sloat offers, "This has not only changed how I approach each assignment, but also each class meeting. Incorporating the purpose/task/criteria framework helps me focus on the main goals for each day, which helps students see the purpose of every class session."

For most of the UNLV cohort, there's an unexpected domino effect. They now see their commitment to revise only two take-home assignments and two in-class activities as "deceptively simple." It has pushed most of them past a tipping



point,⁶ towards making a whole course more transparent to students. “The purpose/task/criteria framework is an overarching way of viewing a course in its totality, not just the assignments,” contends Johnson. Peter Pizor explains, “I thought, naïvely as it turned out, that this was an easy fix. The implementation turned out to be much more challenging. First, in order to bring transparency to an assignment, it is necessary to be absolutely clear why the assignment is needed and how it is integrated into the course. Answering those questions soon brought me back to the essence of andragogy. What exactly was my purpose in each assignment? How did those purposes fit into each step in my syllabus? Like many college instructors, my courses had evolved over a number of years with many small changes. This process sent me back for a fundamental re-thinking of each week in the syllabus and what my specific learning goals were.”

Simple to Complex

Many of the UNLV instructors are now revising all the activities and assignments in their course (not just the two they started with), to create a set of class activities and take-home assignments that build students’ disciplinary skills in a sequence, from simplest skills at the beginning of the term to the most complex at the end. For example, Pizor divided one large course assignment for his online Political Science course into a series of smaller ones, each focused on helping students practice a discrete skill set. And Smedley’s redesigned Sociology assignments also target one set of skills at a time. David Copeland describes the more intentional way he now approaches his course assignments: “Thinking more deeply about the information and skills students should gain from doing an assignment has led me to reconstruct and refine all of my assignments, rather than relying on familiar ones that I have been using for years.” One of Copeland’s longstanding favorites, for example, asks students

to write about how a topic from his psychology course changed their prior way of thinking about the world. “As I thought through the purpose, tasks, and criteria for this assignment, I realized that it was inconsistent with a psychological principle related to memory—that memory of the past can sometimes be inaccurate after learning something new. Based on this realization, I added an in-class exercise and a new assignment at the beginning of the term. These prompt students to briefly note their beliefs about a number of psychology topics. The revised assignment at the end of term now asks students to refer back to those prior beliefs recorded in the new, earlier assignment.”⁷

“Like many college instructors, my courses had evolved over a number of years with many small changes. This process sent me back for a fundamental re-thinking of each week in the syllabus and what my specific learning goals were.”

For some members of the UNLV cohort, the domino effect of redesigning two assignments and two in-class exercises reached beyond the one course to additional courses, and even to a department’s whole curriculum. “I am now in the process of redesigning all my courses using the transparent purpose/task/criteria model,” claims Smedley. Pizor explains that his fundamental rethinking of each week’s learning goals amounted to a paradigm shift. “The biggest long-term benefit was my re-thinking the

course from a student perspective. As I looked at my other courses I realized that there was a lot of room for integration of these concepts. This takes time—first for the rethinking, and secondly, for the detailed deconstruction of much of the old course and a redesigned format based on the transparency model.”

From Whole Course to Whole Curriculum

Sharon Jalene applied the purpose/task/criteria framework to the entire Kinesiology curriculum with her departmental colleagues. They noticed that the tasks required of students in most courses focus on remembering and understanding. These students need more assignments that help them practice the skills of analysis and application before they take upper-level courses where the criteria focus on how students evaluate research data and create new hypotheses. Jalene and her colleagues are adjusting coursework and revamping the introductory and intermediate pieces of the department’s curriculum, to build students’ capacity for success at the advanced end.

What began as an effort to improve UNLV students’ work on course assignments seems to have had benefits beyond the expected improvement of students’ focus and performance on their assigned work—benefits to instructors’ teaching and the way they design whole courses to promote students’ success. |||

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Endnotes:

1. ACT. “Retention Trends 1983–2014.” *Retention/Completion Summary Tables, 2014*. http://www.act.org/research/policymakers/pdf/14retain_trends.pdf
2. The Transparency in Teaching and Learning in Higher Education Project began at the University of Chicago and the University of Illinois and is now housed at UNLV. A sample of the transparent assignment design

framework can be viewed at: http://www.unlv.edu/sites/default/files/page_files/164/Transparent%20Assignment%20Template.pdf

3. Winkelmas, M.-A. 2013, Spring. "Transparency in Teaching: Faculty Share Data and Improve Students' Learning," *Liberal Education* 99 (2). <http://www.aacu.org/publications-research/periodicals/transparency-teaching-faculty-share-data-and-improve-students>

4. Appendix A contains the original and revised (more transparent) versions of the SOC 101 assignment. http://www.unlv.edu/sites/default/files/page_files/164/Example%20A.pdf

5. Appendix B contains the original and revised (more transparent) versions of the SCI 101 assignment. http://www.unlv.edu/sites/default/files/page_files/164/Example%20B.pdf

6. Malcolm Gladwell explains the concept of a tipping point, which has origins in epidemiology. "The tipping point is that magic moment when an idea, trend, or social behavior crosses a threshold, tips, and spreads like wildfire." <http://gladwell.com/the-tipping-point/>

7. Appendix C contains the original and revised (more transparent) versions of the PSY 101 assignment. http://www.unlv.edu/sites/default/files/page_files/164/Example%20C.pdf

TECHPED

Let's Welcome the Graduate Assistant to the Online Village!

Michael L. Rodgers
Southeast Missouri State University

Colleague: Hey, the Dean told me yesterday that you have 200 students in your online course. Didn't you have just 25 last year?

Professor: No, it was three years ago that I had 25. But you heard it right: I have 200 this semester. The course originally served two programs; now it serves seven. At least I've been given five graduate assistants to work in the course. The GA's are all under my direction, but I'm the instructor of record for all sections, I'm afraid. I'm surviving, but I feel that I'm more a manager than teacher these days.

Colleague: Surely your graduate assistants take care of the administra-

tive stuff for you: grading, prepping the labs, etc.?

Professor: Yeah, but I need them to do a lot of the direct interaction with students that I used to do myself when the class size was 25. The trouble is, these students know the content well enough, but they have not had much experience actually teaching that content, whether the course is online or face-to-face. I have staff meetings, but it is clear to me that the assistants need more than a brief review of the week's work.

Colleague: So what will you do?

Professor: I'm looking for a way to provide insights into the pedagogical approaches and teaching strategies that I use throughout the course. Something fairly closely tied to the content. I've been thinking about Aldo Cimino, the production line employee years ago at Campbell's Soup.¹

He was retiring after 46 years, and the company was about to lose his knowledge and expertise. Campbell's hired a team to put Cimino's knowledge into a computer expert system, in the hope that his successors would be able to "consult" with Cimino about production line issues, long after he left the company. Now, I don't have the time, resources, or computer knowledge to build an expert system into my course, but I liked the idea that Aldo was "present" on the production line even after he retired. I'd like to also be "present" to my GA's, by locating some teaching resources where the GA's actually work with the course content. Maybe some notes will provide guidance when and where they need it most. So, I've been looking for ways to get our Moodle LMS to unobtrusively make the teaching notes available to the GA's on an as-needed basis.

Graduate Assistants in the Classroom

Universities with graduate programs have long employed gradu-

ate assistants to lead recitation sections, manage lab sections, grade assignments, and give lectures when the instructor is absent. Institutions benefit from low employment costs coupled with recent experience (as undergraduates) with the content. Some programs require all graduate assistants to serve as teaching assistants for a time, even if funded research projects that support full research assistantships are plentiful, on the theory that a holder of an advanced degree should be able to teach in the discipline. New GA's are now typically provided

with training in institutional policies, lab and classroom safety, familiarization with the institution's learning management system, and perhaps an overview of departmental or course-wide instructional practices.

While on assignment, teaching GA's sometimes

work with the lead instructor to develop homework assignments, create case studies, validate lab experiments, or produce other course materials. More often, the instructional duties are limited to grading assignments and working directly with students using course materials provided by the instructor. In these cases, the GA's aren't really challenged to design learning resources or activities that foster student learning. Instead, the GA's merely trust that the instructor's materials will work. As of now, GA's are mostly found in large, multisection undergraduate courses, but the burgeoning number of online courses is sure to increase the exposure of GA's to prebuilt online instructional environments.

Guidance for Online GA's

GA's in a face-to-face course can—and often do—meet with the lead instructor to discuss how



content should be taught: establishing the appropriate level of rigor, standardizing the way that specific content is presented, emphasizing conceptual links between content items, building consistency in the application of scoring rubrics, to list a few. The synchronous nature of face-to-face courses lends itself to regularly-scheduled staff meetings to address these issues. But in an

online course, where interaction with students is largely asynchronous, regular staff meetings begin to lose their value. Direct instructor–student interaction occurs outside of a regular schedule, and as a result, often requires a more individualized

approach. Waiting for next week’s scheduled staff meeting will likely lead to gaps in an inexperienced GA’s ability to apply the “right” instructional strategy to address the student’s needs at the time that the needs are realized. Immediate guidance from the instructor may enhance the potential for student understanding and improve the consistency of GA’s responses to students at least until the GA has become very experienced teaching the online course.

In addition to these direct benefits, teaching resources can reveal to a GA much about HOW a course is taught. Typical undergraduate courses—especially science courses, with which this author is most familiar—almost universally focus on the course content and ways that those in the discipline use the content to solve problems and create new content knowledge. Undergraduates might be told that a course is “flipped” or “inquiry-based,” but additional details are not generally offered. Even those GA’s fortunate enough

to have a unit on effective teaching in a GA training program are unlikely to get enough teaching practice to lift the GA above beginner status.

Embedded Professional Development

Most LMS installations allow teaching resources to be embedded in or near the course content that students in the online course will use. In Moodle, for example, essay-type Quiz questions include an “Information for graders” field, in which special instructions, teaching tips, and even links to videos and other external resources, can be located on the same

page in Moodle where GA’s are grading student responses. Unlike the “General feedback” field (displayed after the student has completed the question), and the “Response template” (providing guidance to the student before a response is attempted), the “Information for graders” field is visible only to GA’s (and instructors) who have permission to grade the question. A GA preparing to teach the content in the question can easily open the question for grading to see the notes.

Groups represent another way to insert teaching guidance into an online course. Moodle and other LMS’ allow instructors and course designers to organize groups within the course that have special viewing privileges. It is quite easy to juxtapose student-viewable content and teaching notes, videos, and other guidance visible only to the GA’s group. At the click of a link, a GA can get a video providing help with a difficult point,² view teaching notes,

practice problems to use in discussions, or work with other aids. Likewise, discussion forums could be dedicated to specific online activities for GA’s to share ideas and ask questions of the instructor before the activity goes live to the students. A potentially valuable feature of embedded teaching guidance is its presence in the LMS usage logs³: the logs make it easy to track GA page views as a way to provide quantified evidence of GA performance in the course. LMS log data could also form the basis for research into the effectiveness of the lead instructor’s teaching guidance, by comparing usage data with student scores, for example. A strong positive correlation between GA usage and student scores may help convince GA’s that skillful teaching is not an innate ability, but a trait that can be developed through implementation of appropriate tools. Institutional policies and campus culture permitting, log data could also be used in GA performance evaluations, especially if GA’s are explicitly directed to use the guidance in their teaching.

“Reality suggests that professional development in teaching may be valuable even to those holders of advanced degrees who teach only as a sideline to a non-academic career.”

Will GA’s Care About Teaching?

Students pursue graduate degrees for many reasons, but whatever the motivation, recogni-



tion of advanced knowledge, expertise, and professional status appertain to the achievement. Even those graduates who did not seek the degree to enter a career in academia are finding opportunities to teach in institutions of higher education on a part-time, temporary basis. Indeed, “more than 50 percent of all faculty hold part-time appointments.”⁴ This reality suggests that professional development in teaching may be valuable even to those holders of advanced degrees who teach only as a sideline to a non-academic career. Guidance that builds teaching expertise within the courses to which GA’s are assigned may benefit both the undergraduates for whom the GA’s are responsible, and the GA’s themselves, as they leverage the advantage of teaching ability to enhance their careers. And, some teaching skills learned on the job should reinforce the desirable notion that GA’s are valuable members of a team with an extremely important and challenging mission. ■■

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INNOVATION

Digital Badges to Assess Bloom’s Affective Domain

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Background. Digital badges started to gain nationwide attention soon after Secretary Arne Duncan addressed the nation in the 4th Annual Launch of the MacArthur Foundation Digital Media and Lifelong Learning Competition in 2011. He noted that badges can help learners acquire and demonstrate skills since they accurately measure competency in various educational settings. Years later, there is still uncertainty about what badges are and how we can utilize them effectively.

So what are digital badges? A *badge* is a symbol or indicator of an accomplishment, skill, quality, or interest.

Digital badges are online records of achievements that can support connected learning environments by motivating learning and signaling achievement (see <http://openbadges.org/about/>).

There is another type of digital badge that takes the concept further: *Open Badges*. This type of badge allows the *viewer* of the badge to verify skills, interests, and achievements that the *earner* of the badge has attained via information (*metadata*) attached to the badge image file. The metadata includes information such as the entity issuing the badge (i.e., a reputable university versus an unknown source), the criteria used to earn the badge, and the evidence submitted to earn it (e.g., videos,

images, documents, web links, assessments). This type of badge is ideal for higher education.

Open Badges and Bloom’s Affective Domain

The mission statements and strategic plans of most colleges and universities claim to prepare graduates for a global society and global citizenship, yet the vast majority of educational activities and assessment tools focus on content mastery, not on developing the type of skills needed to achieve that goal. Many of the skills needed to reach the goal fall under Bloom’s *affective domain*; however, faculty members are more familiar with (or deal with aspects of) Bloom’s *cognitive domain*. Thus, if educators are asked to incorporate additional learning objectives into their courses, including the development of skills related to the affective domain, they are left with the question of how to assess the acquisition of such subjective skills. Open badge systems, when

adequately designed, can be a useful tool in overcoming this challenge.

As educators, we can certainly recognize that Bloom’s affective domain is an important part of a holistic education and most of us will be able to recall a time when we witnessed students undergoing this type of personal growth in our classrooms. But it is often difficult to pinpoint the exact mechanism that triggered this type of

learning and even rarer to have an assessment tool in place to demonstrate that such learning has taken place. Open badges can help us capture this “special type of learning” as well as other aspects that we do not normally evaluate in more traditional forms of content-based assessment like summative exams and reports. Grant (2014) states that while traditional assessment approaches favor objective and



quantifiable measurements, 21st century skills (like the ones belonging to Bloom's affective domain) require different methods altogether. The author suggests that badge systems with alternative forms of assessment designed to recognize collaborative work, deeper learning, and increased engagement can be a viable solution.

Digital badges can be tailored to measure and demonstrate various types of skills. Mozilla provides a short list which includes *hard skills* (e.g., mastering a programming language or math concept) and *soft skills* (e.g., critical thinking, collaboration). Skills under Bloom's affective domain fall into the category of *soft skills* and they include the way in which people deal with things emotionally. Perhaps this is why the assessment of this domain is so challenging: it requires the learners' self-reflection to perceive and evaluate feelings, values, appreciation, enthusiasm, motivation, and attitudes. Bloom's affective domain hierarchy goes from simply receiving phenomena to internalizing values. This process will most likely take time and continue throughout the learner's lifetime, making it even harder to capture how students mature along this domain.

Examples

Purdue University—The use of digital badges to assess Bloom's affective domain and its corresponding soft skills is still in its infancy, but there are some institutions that are using badges to evaluate aspects related to it. At Purdue University, the Global Learning Faculty Development Program designed two badge systems to serve as tools for faculty to document the acquisition of skills such as intercultural openness and curiosity; cultural self-awareness and worldview; intercultural empathy and communication; as well as civic engagement, global citizenship, and social responsibility. The level at which students are in relation to Bloom's affective domain is determined by the type of activities and reflection prompts that the faculty member chooses as criteria to fulfill

each particular badge. The system is flexible and can be modified to meet different courses or faculty members' needs. For instance, the course *Communicating Across Cultures* in the College of Agriculture recently incorporated the cultural self-awareness badge. Students are given seven tasks throughout the semester where they deepen their self-perception and articulate insights into their own cultural rules, assumptions, and biases. In the process, they become aware of how their experiences have shaped those rules, assumptions, and biases (see <http://www.purdue.edu/cie/learning/global/pupil.html> for more information).

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University of Central Oklahoma—Another institution that is using badges to assess soft skills is the University of Central Oklahoma. Their Transformative Learning program strives to help students learn by providing transformative experiences that lead to the development of six key areas: *Discipline Knowledge, Leadership, Problem Solving (Research, Scholarly and Creative Activities), Service Learning and Civic Engagement, Global and Cultural Competencies, and Health and Wellness*. The institution uses a tool called the *Student Trans-*

formative Learning Record (STLR) to document the development of these important skills which, in their words, “are not documented on the academic transcript, but a university graduate should be able to demonstrate them.” This is part of an institution-wide effort to create “learning activities and environments designed to expand students’ perspectives about themselves and others so that they understand the benefit of developing important life skills while they are in college and afterwards as life-long learners.” As students complete their STLR during their studies, they also progress on Bloom's affective domain (read more about STLR at <http://www.uco.edu/central/tl/stlr/index.asp>).

Setting Criteria

It is important to note that the criteria for digital badges has to be carefully defined to ensure that they reflect the acquisition of the learning outcomes/objectives that the badge is intended to represent. An open badge is not a magical gadget that creates “affective domain activities,” nor does it automatically measure the mastery of a particular level in the affective domain, and it certainly does not assess the quality of a student's evidence to fulfill criteria. Even though most programs allow the issuer to set up the system to automatically award a badge, when dealing with students' reflections and other aspects of Bloom's affective domain, I would strongly advise against using this feature. Successful and reliable badge systems in higher education are designed and monitored by faculty members and/or instructors, contain high quality evidence in their metadata, and have an appropriate feedback loop set up so that students can monitor their progress.

The value of open badges comes from allowing the students to “show what they know” in more than letter grades or a number on a five point scale. Open badges designed to assess Bloom's affective domain are especially useful when students want to demonstrate that they have de-

veloped skills that will allow them to seamlessly integrate into the workforce as team members, leaders, respectful listeners, effective communicators, objective problem solvers, and ethical professionals. The earners of this type of badge have a powerful tool to show that they are aware of their own judgments and biases, but have the ability to revise those judgments and behaviors according to the ever-changing environment in our global society. By this means, a potential employer would be able to get a better sense of the learner's soft skill set, which is so difficult to quantify in traditional job application materials.

Despite all the potential the "digital badge revolution" has to offer, it is taking longer than expected for people to adopt the concept. If you are ready to try open badges, there are various online resources to help create and award them. It is important to choose a program that has been especially designed for higher education, since one of the main concerns with digital badges is their validity and credibility. An example is *Passport*, a system developed by educational technologists at Purdue University. The program is a learning and e-portfolio system that uses digital badges to demonstrate user's competencies and achievements. It is uniquely built to be an assessment platform that allows issuers of a badge to tie learning outcomes to badge challenges; and it also allows for badge scaffolding, varying point values, and forced order to earn a badge. All of these features are a plus for educators interested in designing activities that aim to measure how learners advance through Bloom's affective domain. You can learn more about this program and apply for trial access by visiting <http://www.itap.purdue.edu/studio/passport/>. ■■

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AD REM . . .

The Goldilocks Principle: "Just Right" and Beyond

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We've been looking recently at the 25 principles of psychology that can inform our teaching, and we've gone through quite a few of them. So today I'm going to make the application setting more difficult and therefore possibly more realistic by introducing some of the principles that seem to be in conflict.

The "Goldilocks Principle" of the title says that "assessments should not be too hard or too easy, but at the right level of difficulty for the student's level of skill or prior knowledge." (APA principle #21). It makes a great deal of sense to try to pitch an evaluation at a level

that would tap the zone of not too hard and not too easy, but just at the level of difficulty that would be the most productive for their learning. Known as the Zone of Proximal Development, this level has been proposed by the Russian psychologist, Lev Vygotsky, as the point in a learner's skill level where the greatest improvement can be made during learning. Activities at which someone always fails, or alternatively always succeeds, don't tell you where the tipping point of success is. In large introductory classes, it is difficult to predict accurately unless you have interim data that can provide some idea of where everyone stands. For example, doing regular assessments

similar to exams on the run up to the real exam can provide information about what the students do or don't understand. Of course, if students expect to get all the activities correct all the time, taking a test designed to tap into the "just right" level might disappoint some who are accustomed to being able to answer every question correctly. But the point at which they fail can be very informative to their learning. It might be worthwhile to let the students in on the strategy during learning, i.e., it's most worthwhile to see questions where failure is to be expected because that informs learners of the holes in their understanding before it's too late.

Which brings us to a conundrum present in the APA principles. We have the principle of pitching the activities like assessments at a balancing point, but we also have the principle #14 of "desirable difficulties," an idea that

I've written about before. This principle states that "challenges make learning and retrieval effortful and thereby have positive effects

on long-term retention." Desirable difficulties are difficult tasks that have a positive effect on learning, probably due to effort expenditure or unexpected negative evaluation of an individual's work. The subsequent failure, providing it is not debilitating, spurs the learner on to try harder or to dig deeper to understand the task. This argues against items that are "just right" and in favor of pushing the students to the more difficult side of the balance because it is likely to make them work more mindfully.

The conundrum is that the Goldilocks Principle and the Desirable Difficulties principle seem to be at odds. In reality, they each accomplish a different goal: the first,



to pitch learning and assessment at the balance point of success and failure and, the second, to challenge the students during learning by presenting them with difficult tasks they cannot do at first. In fact research in this area points at what impact these two have on learning and additionally, transfer. Things that are pitched at the ZPD or for which we provide a lot of scaffolding and feedback make for faster learning. However, students confronted with difficult tasks at which they might fail at first have a hard time with learning, but are more likely to be able to transfer what they learned to a new setting. Why is this? The speculation is that the desirable difficulties tasks cause students to process their learning more deeply and understand WHY one approach will work and another won't. They are more likely to have ferretted out the rule behind the solution, and it's the rule that allows them to transfer. But they have to keep at it long enough to find the solution.

To avoid the frustration that students feel when the task they are assigned seems to be more difficult than their level of understanding, we can invoke an idea from the 23rd APA principle—"most students have trouble discovering

important principles on their own, without careful guidance, scaffolding, or materials with well-crafted affordances." It's the last part of this principle—the principle of Guidance and Scaffolding—that perhaps can resolve the apparent conflict between Goldilocks and Desirable Difficulties. This principle is one outcome of the Discovery Learning movement. Initially, theorists and researchers believed that the best learning would happen when students were free to learn on their own by solving complex problems in groups. Unfortunately, quite a bit of data surfaced to challenge that assertion. Even very talented learners had problems with ill-structured tasks or needed more time than was available. Like good coaches, teachers found that they could provide help in the form of scaffolds to enable learners to learn on their own. The scaffolds included things like providing a timely hint when students appeared to be frustrated. Or lowering the cognitive load required by the problem so that more of the students' intellectual effort could be focused on the key problem. (By the way, the Cognitive Load idea is also one of the APA principles—#15 Manageable cognitive load, which states that the

information presented should not overload working memory.)

One thing we can take away from the intersects of these various principles of learning is that "just right" is probably the target for assessments such as tests, and desirable difficulties and scaffolding are the strategies for learning and formative assessments such as in-class activities or homework. They fit together like a puzzle in order to make a complete picture of learning. |||

Endnotes:

1. All the principles discussed and quoted in this piece come from Graesser, A.C. 2009. "Inaugural Editorial for Journal of Educational Psychology." *Journal of Educational Psychology* 101 (2): 259–261.

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