NADE Digest

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NADE Digest

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NADE Digest

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Seminar Approach for Study Group Leader Training

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At the university during fall 2006, I created a college-credit course to help group leaders apply educational theories during their study group sessions. This course was required of all new group leaders starting during fall semester. Rather than a didactic class format led by me as the instructor, a collaborative seminar model was employed. In the class, these students studied education theory articles and discussed how to apply this information to their weekly sessions. This understanding helped them create new learning activities not contained in the formal training program. It also made better sense of dynamics within the group and how to employ culturally-sensitive learning activities. This course was part of a larger required professional development component for the study group leaders.

Introduction

A new approach for providing academic support for students began during 2004 at the University of Minnesota-Twin Cities. The Peer Assisted Learning (PAL) program was created to serve students in large, introductory courses that are academically rigorous. Typical classes were general chemistry, organic chemistry, and college algebra. All had rates of 30% or more final course grades of D, F, or course withdrawal. These courses were selected through discussions with the academic department chairpersons. The PAL program shares similarities with the approaches of Supplemental

Instruction, Peer-led Team Learning, and the Emerging Scholars Program (Arendale, 2014).   Thus far, the PAL approach has improved academic performance for participating students (Cheng and Walters, 2009; Ediger, 2007; and Lilly and Goegen, 2011). I was appointed to the leadership team for developing the PAL program and its training component.

In the beginning, we used a standard approach to training the undergraduate students who served as PAL facilitators of these study groups. The study group leaders were selected through a competitive interview process after employment announcements had been posted on campus. The applicants were evaluated on the basis of their interest in the position, subject-matter competence, communication skills, and recommendations from faculty members and others. We used the popular curriculum developed by Ross MacDonald (2000) and our own training manual (Arendale and Lilly, 2012). A two-day training workshop occurred before the beginning of the semester for the PAL facilitators. Based on surveys of the workshop participants, results from the training program were satisfactory, but we wanted to explore other options.

During Fall 2006, we added a one-credit course for training the new facilitators (Arendale, 2010a). Enrollment in this course was required for PAL study group facilitators during their first semester of service at the university. I co-taught the course with my graduate assistant, Kari-Ann Ediger. The following year she suggested we employ a seminar format for the course and use academically-rigorous articles to spur discussion for application of theory to practice. She had primary responsibility for teaching this course during the first year, and I taught it for the following three years. A modified version of the course now continues under a different instructor. This article provides an overview of the curriculum as I taught it with suggestions for its use by others.

Review of the Professional Literature

Through the national study of more than 160 colleges, Boylan, Bliss, and Bonham (1997) identified the positive impact of tutor training programs upon their effectiveness in helping students earn higher grades. Other researchers have identified important components of that training. A study by Barron and

Font (1991) found understanding the underpinning theory for desired procedures led to more effective use of them. Ricks and Sheets (1991) advocated for a holistic training agenda for tutors with attention to cognitive and student development outcomes since both were linked to higher achievement. Higbee, Arendale, and Lundell (2005) advocated for greater understanding and application of learning theories to education practices in developmental education and learning assistance. Lipsky (2006) describes a credit-bearing course for training study-group leaders. Understanding educational theories is part of the recommended curriculum by the College Reading and Learning Association through their tutor training certification (2014).

Overview of the Seminar

Enrollment in Exploring Facilitated Peer Learning Groups is part of the professional development of PAL facilitators during their first semester of service (Arendale, 2010a). The one-credit course is free since full-time students pay the same tuition for 15 or more credit hours. It meets weekly over the academic term. PAL facilitators also participate in a two-day training workshop before the academic term begins, attend weekly PAL team meetings with the program director and staff, and participate in other activities. Nearly all PAL facilitators are undergraduates.

This course takes a different approach to continued professional development of the new PAL facilitators.   The previously mentioned two-day training workshop uses instructor demonstration, and has the facilitators practice specific study-group skills and strategies. This course explores peer learning groups and the educational theories that influence their effectiveness.   As students learn the underlying theories, the class generates specific applications for their PAL sessions. This course provides the grounding for the procedures practiced during the initial two-day training workshop and builds the facilitators' capacity to innovate with creating their own theory-based study group activities during the academic term. Rather than using didactic instruction, I use a seminar approach to foster more engagement of the students with the course topics with me serving as moderator of the discussion.

The course has seven learning objectives:

1. Identify and discuss the application of learning theories with peer-assisted learning groups.

2. Increase skill in small group management skills to achieve learning objectives.

3. Contextualize learning strategy modeling and instruction within the specific academic context area supported by PAL.

4. Learn to analyze the learning needs of others and make modifications to the learning environment.

5. Grow as independent learners and build upon their current strengths through development of new learning strategies.

6. Further develop intellectual skills of analysis, synthesis, critical evaluation, and application through completion of course activities.

7. Adopt new strategic learning strategies to successfully apply with course material.

The course requires students to make weekly journal entries through the course web site which is only viewable by the course instructor. The entries focus on the reflections about their academic and personal changes as a result of this experience, and as the instructor, I found it useful to provide feedback based on their entries. In addition, the PAL facilitators complete an extensive end-of-term experience survey as a capstone reflection of their experience and how they changed academically and personally. I also interviewed each student for an audio episode of a course podcast which I moderated (Arendale, 2010b). Selected episodes are assigned by the PAL program director for review by facilitators.

Course Curriculum

The central core of the PAL facilitator course is discussion of educational psychology topics and their relationship to PAL activities. Each PAL facilitator is given a choice of topics for their presentation. In my case, I provided a small number of research-based articles from which to select. (Following this section is a

list of the topics and a choice of articles I provided them.) After taking a few minutes to review the paper copies of the articles, each student selected one of the articles, and I retained the master copy. Based on it, I developed several questions for use during the class discussion following their presentation also with my brief remarks at the beginning and end of the class session regarding the topic and application to PAL. Each student in the class was required to read only his or her article.

I allowed each student 15 minutes for their assignment—approximately eight minutes to present and seven minutes to lead a class discussion. The focus was application of the article to PAL sessions and not analysis of the entire article, especially the research method and analysis sections. One topic was addressed each week during the one-hour class session with three students typically presenting each week. When possible, the three students shared on the same topic category.

In addition to participating in the class discussion, students completed a short written response to the following prompts on a form I provided: (a) what is something new learned from the presentation? and (b) what about the speaker's presentation went well or what could be improved? This writing activity made them accountable for actively listening to the presentation as well as providing useful feedback to the presenter, and the written feedback enhanced professional development of the presenters regarding their public speaking skills. The form was printed on two-part carbonless paper with the original copy being given to the presenter and the other retained by me. I also completed a form for each presenter as well.

The following is an abridged list of articles from which the students chose. I placed a paper copy of each article on a table in the classroom on the first day of the course, and students were given sufficient time to briefly review the articles and then make their selection. Without prompting from me, students selected articles from all the categories. With a class size of 20, often three students would select from the same category.

Goal Orientation Category

Elliott, E. S., & Dweck, C. S. (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology, 54*(1), 5-12.

Gordon, S. C., Dembo, M. H., & Hocevar, D. (2007). Do teachers' own learning behaviors influence their classroom goal orientation and control ideology? *Teaching and Teacher Education, 23*, 36-46.

Harachiewicz, J. M., Barron, K. E., Tauer, J. M., & Carter, S. M. (2000). Short-term and long-term consequences of achievement goals: Predicting interest and performance over time. *Journal of Educational Psychology, 92*(2), 316-330.

Linnenbrink, E. A. (2005). The dilemma of performance-approach goals: The use of multiple goal contexts to promote students' motivation and learning. *Journal of Educational Psychology, 97*(2), 197-213.

Self-Efficacy and Belonging Category

Bong, M. (2004). Academic motivation in self-efficacy, task value, achievement goal orientations, and attributional beliefs. *The Journal of Educational Research, 97*(6), 287-297.

Preckel, F., Holling, H., & Vock, M. (2006). Academic underachievement: Relationship with cognitive motivation, achievement motivation, and conscientiousness. *Psychology in the Schools, 43*(3), 401-411.

Stevens, T., Olivarez, A., Lan, W. Y., & Tallent-Runnels, M. K. (2004). *The Journal of Educational Research, 97*(4), 208-221.

Metacognition Category

Goos, M., Galbraith, P., & Renshaw, P. (2002). Socially mediated metacognition: Creating collaborative zones of proximal development in small group problem solving. *Educational Studies in Mathematics, 49*, 193-223.

Mayer, R. E. (1998). Cognitive, metacognitive, and motivational aspects of problem solving. *Instructional Sciences, 26*, 49-63.

Mevarech, Z. R. (1999). Effects of metacognitive training embedded in cooperative settings on mathematical problem solving. *The Journal of Educational Research, 92*(4), 195-205.

Schurter, W. A. (2002). Comprehension monitoring: An aid to mathematical problem solving. *Journal of Developmental Education, 26*(2), 22-24, 26, 30, 32-33.

Vukman, K. B. (2005). Developmental differences in metacognition and their connections with cognitive development in adulthood. *Journal of Adult Development, 12*(4), 211-221.

Help-Seeking Behavior Category

Ryan, A. M., Patrick, H., & Shim, S.O. (2005). Differential profiles of students identified by their teacher as having avoidant, appropriate, or dependent help-seeking tendencies in the classroom. *Journal of Educational Psychology, 97*(2), 275-285.

Stavrianopoulos, K. (2007). Adolescents' metacognitive knowledge monitoring and academic help seeking: The role of motivation orientation. *College Student Journal, 41*(2), 444-453.

Trautwein, U., & Ludtke, O. (2007). Students' self-reported effort and time on homework in six school subjects: Between-students differences and within-student variation. *Journal of Educational Psychology, 99*(2), 432-444.

Diversity Category

Davis, J. & Martin, D. (2008). Racism, assessment, and instructional practices: Implications for mathematics teachers of African American students. *Journal of Urban Mathematics Education, 1*(1), 10-34.

Martin, D. (2006). Mathematics learning and participation as racialized forms of experience: African American parents speak on the struggle for mathematics literacy. *Mathematical Thinking and Learning, 8*(3), 197-229.

Nasir, N. S. (2002). Identity, goals, and learning: Mathematics in cultural practice. *Mathematical Thinking and Learning, 4*(2-3), 213 - 248.

Nasir, N. S., Rosebery, A. S., & Lee, C. D. (2006). Learning as a cultural process: Achieving equity through diversity. In K. Sawyer (Ed.), *Cambridge handbook of the learning sciences* (pp. 489 - 504). New York: Cambridge University Press.

Treisman, U. (1992). Studying students studying calculus: A look at the lives of minority mathematics students in college. *The College Mathematics Journal, 23*(5), 362-372.

Academic Engagement Category

Freeman, T. M., Anderman, L. H., & Jensen, J. M. (2007). Sense of belonging in college freshmen at the classroom and campus levels. *The Journal of Experimental Education, 75*(3), 203-220.

Miller, R. B., Greene, B. A., Montalvo, G. P., Ravindran, B., & Nichols, J. D. (1996). Engagement in academic work: The role of learning goals, future consequences, pleasing others, and perceived ability. *Contemporary Educational Psychology, 21,* 388-422.

Discussion and Recommendations

This approach to the class has been used since 2008. Based on our experience, I would offer the suggestions for implementation, many of these resulting from trial and error experiences with my own seminar students. If I were still teaching the class today, I would replace some of the articles indicated earlier based on my recommendations which follow.

1. Clearly direct presenters to focus on a brief overview of the article and then spend two-thirds of their time on applying the educational theory to PAL. I noticed it was easy for the students to spend too much time describing the research study which might be interesting, but neglect enough time on the lesson learned and applications that could be made for their PAL sessions. Use time cards to help the speaker stay on time.

2. Select research articles that focus on college-level or at least high-school students. Otherwise, students are unsure of the applicability for their PAL sessions if they involved elementary students.

3. Select potential articles that might appeal to them and be appropriate. Experiment with articles of different academic rigor or amount of time spent describing educational theories.

4. The course instructor provides a brief introduction and conclusion to each class session focusing on a clear overview of the educational theory assigned for that class period.

5. Ask the students for permission to post their presentation handouts to the course website so others in the class can reference them.

6. Prohibit students from using Power Point during their presentations. Instead, ask them to create a one-page handout with a summary of what they learned and a list of applications of the theory to their work as a PAL facilitator. My past experience was that students spent too much effort creating visual presentations and not enough time on making applications to PAL.

7. Provide a short overview of these education theory categories during the initial training workshop for the PAL facilitators before the academic term begins. This would help connect theory to what they were learning procedurally during the workshop.

8. If a weekly journal entry is required of the students in the class, ask them to focus specifically on that week's theoretical topic, how they are attempting to implement it within their PAL sessions, and what reactions they are receiving from the students.

9. During the first class period, the course instructor models this assignment by providing a 15-minute session on application of an education theory as described above.

Conclusion

Our students responded well to this approach of introducing theory to the training curriculum. They displayed interest in understanding the connection between theory and the procedures of the PAL program. During the class sessions, students revealed clever and innovative thinking as they worked together using theory to generate practical applications for the PAL sessions. It taught me that a seminar approach with challenging academic material with a strong theory base can be accomplished by undergraduates and not just graduate students. The key for the students was the relevance of theory to their work.

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Boylan, H. R., Bliss, L. B., & Bonham, B. S. (1997). Program components and their relationship to student performance. *Journal of Developmental Education, 20,* (1), 2-9.

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Lilly, M., & Goegen, K. (2011). *Peer Assisted Learning: Consistency goes with success.* Unpublished manuscript. SMART Learning Commons, University of Minnesota, Minneapolis, MN.

MacDonald, R. B. (2000). *The master tutor: A guidebook for more effective tutoring.* Williamsville, NY: The Cambridge Stratford Study Skills Institute.

Rings, S., & Sheets, R. A. (1991). Student Development and metacognition: Foundations for tutor training. *Journal of Developmental Education, 15* (1), 30-32.

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A Mobile Learning Application for Student Success and Retention

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This paper describes the development of a prototype mobile learning software, called Student Success Application (SSA), and explains its potential as a tool for increasing student success rates and retention. SSA is designed to link developmental studies and first-year community college students to resources such as academic support center, academic advising offices, student development staff, student media, and the campus's social and cultural calendar of events with the aim of increasing student retention and academic success. This paper offers faculty and administrators insights into the design and development of an app and offers a theoretical framework for the app as a tool for student learning.

Student success courses at United States colleges and universities teach study skills, orient students to campus, and allow learners to forge relationships with faculty members and peers critical to their academic success (O'Gara, Karp, & Hughes, 2009). Although the focus on student success is a concern at all levels of education, it is even more critical in community colleges where 50% of students drop out before the end of their first year (Survey of Entering Student Engagement [SENSE], 2013). In this paper, we report on the development of a smart-phone application designed to help students form connections with people and departments on an urban community college campus and examine how mobile technologies could be used to assist in their first semester.

Community colleges are often lauded for their open admission policies that expand opportunities for everyone to attend higher education (Goldrick-Rab, 2010). However, as in four-year institutions, students who are at risk drop out at a faster rate due to developmental, family, and other background related issues. Over 2,000,000 students enroll in developmental courses each year in the United States, yet success rates have been problematic (Boylan, 2009). A 2013 United States Government Accountability Office (GAO) report estimated that "42% of entering community college students were not sufficiently prepared for college-level courses and enrolled in at least one developmental education course" (p.1). The same GAO report indicated that fewer than 25% of developmental education students complete a degree or certificate in 8 years (GAO, 2013). In the national push to achieve higher graduation rates, especially for the nation's community college students, technology can and should play a prominent role (Kuh, Kinzie, Schuh, Whitt et al. 2005; Johnson-McPhail, 2011).

The Student Success Application (SSA) for smart phone application (app) grew out of an interest in exploring how mobile technologies could be used to assist with the orientation of first-semester community college students. Using a smart phone, the app "points" students to the target campus's electronic student success resources such as websites that include motivational student videos, the campus academic calendar, course syllabi, crisis counselors, and student media (Wilson and Wu, 2013). With mobile technologies and their applications being prevalent at all levels of society, SSA is our initial attempt to leverage their potentials to support community college students' success by participating in mobile learning.

Mobile Learning

Mobile Learning (also referred to as mLearning or – mlearning) commonly refers to learning involving mobile devices in formal and informal spaces. More specifically, mLearning can be can be defined as "the processes of coming to know through conversations across multiple contexts among people and personal interactive technologies" (Sharples, Taylor, and Vavoula, 2007, p. 4). Participation in mobile learning involves "the use of a wireless handheld device; a cell phone, a personal digital assistant (PDA), mini-computer, or iPod to engage in some form of meaningful learning" (Stevens and Kitchenham, 2011, p. 3). mLearning in formal education structures is heavily based on the belief that mobile devices such as Smart phone applications have the potential to be a useful tool within a pedagogical framework that bridges the gap between community college students' formal and informal learning environments (Pachler, Bachmair, and Cook, 2010). The authors believe SSA carries the potential to bridge the gap in community college students' formal and informal learning environments (Pachler, Bachmair, and Cook, 2010).

Objective

The app was originally developed to meet course requirements in a technology design course, Apps for Education, in the Learning, Design, and Technology Program at The Pennsylvania State University. The design team sought to extend learning opportunities and experiences to first-year and developmental education students beyond the classroom. Research on the use of mobile devices in classroom settings is nascent but growing. Abilene Christian University's nearly five-year-old mobile learning research initiative uses iPhone, iPad, and iPod hardware and apps; the school reports promising results linked to the devices including increased independence for learners, enhanced communication and engagement, and a more customized and contextual learning experience (2013). Stanford and Oxford Universities have also implemented large-scale mobile learning initiatives that rely on apps and mobile web-based applications (Quinn, 2012, p. 45). Mobile Webquests, short messaging service (SMS), multimedia messaging service (MMS), mobile digital note systems, and augmented reality apps also show promise for classroom use in higher education (Caverly, Ward, & Caverly, 2009; Zhang, 2008; Misono & Akahori, 2008; Hartnell-Young & Heym, 2008; Uffendell, Hefferen, & Finnigan, 2009). At the University of California at San Diego, the "Active Campus Project" deployed some 500 networked personal digital assistants (PDAs), instant messaging, and location-aware software to improve learning community experiences on a large, urban campus (Griswold, Shanahan, Brown, Boyer, Ratto,

Shapiro, & Truong, 2004). In South Africa, the MobileED project demonstrated that mobile phones could be used to effectively aid the learning process (Ford & Nonen, 2009). More recently, a major provider of learning management systems, Blackboard, announced plans to deploy a mobile learning system with applications for Android and iPhone as a way to better engage 375,000 students enrolled in credit and non-credit courses at Virginia Community College System (Virginia, 2013).

Millions of users in the United States and around the world are adapting mobile phones and smart mobile devices into their daily lives (Caverly, Ward & Caverly, 2009; Squire, 2009). A study by the PEW Research Center (2010) identified high levels of cellphone use by community college students; therefore, the authors wanted to create a way to leverage the market penetration of these devices for educational use in and outside the classroom. Figures 1 and 2 illustrate the percentages of students who own a mobile device.

College students and their gadgets
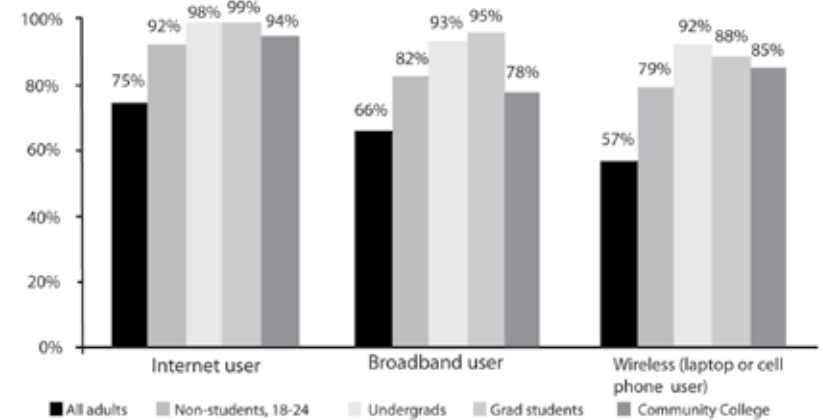Percentage of all adults in each group who own different devices

	All adults	Non-students 18-24	Undergrads	Grad students	Community College
Cell phone	82%	89%	96%	99%	94%
Desktop computer	60	58	59	73	67
Laptop computer	52	64	88	93	70
iPod or mp3 player	45	69	84	86	72
Game console	41	64	58	49	61
e-book reader	5	4	9	7	4
Tablet computer	4	4	5	5	4

Source: Pew Research Center's Internet andAmerican Life Project 2010 tracking surveys. All include landline and cell phone interviews. N for all adults=9,769, n for 18-24 year old non-students=717; n for four year undergrads=246, n for grad students=112, n for community college students=164.

Figure 1. Market penetration of technology for the college-age population shows the ubiquitous nature of cell phone use and other technological devices by college students. Adapted from "College Students and Technology, " by A. Smith, L. Rainie, and K. Zickuhr, 2011, *Pew Internet & American Life Project.* Copyright 2011 by Pew Internet & American Life Project. Reprinted with permission.

Connected college students
Percentage of American adults in each group who use internet, have broadband or connect wirelessly

Source: Pew Research Center's Internet andAmerican Life Project 2010 tracking surveys. All include landline and cell phone interviews. N for all adults=9,769, n for 18-24 year old non-students=717; n for four year undergrads=246, n for grad students=112, n for community college students=164.

Figure 2. Internet connectivity for student users exceeds that of other adult users. Adapted from "College Students and Technology."by A. Smith, L. Rainie, and K. Zickuhr, 2011, Pew Internet & American Life Project. Copyright 2011 by Pew Internet & American Life Project. Reprinted with permission.

Theoretical Framework

SSA functions as a smartphone compass, pointing students to web-based learning materials created to promote student success and retention; it is designed for use in a face-to-face student success course based on a social constructivist theoretical framework (Bruner, 1961; Quinn, 2012; Vygotsky, 1978). In mobile learning, students' "coming to know" and "meaning making" abilities extend beyond interpersonal communications to include technological and socio-technical systems such as the internet and mass media (London, 2013) and through educational technology such as SSA. In this sense, SSA is transcendent because it capitalizes on student mobility, informal learning environments, internet communications technology (ICT), digital networks, and virtual communities (Land, Smith & Zimmerman, 2013; Wilson and Blackstock, 2012). Consequently, SSA has the potential to enhance communications between students, faculty, and staff in both formal and informal settings and even to encourage the cognitive

and social development of students (Evans, Forney, Guido, Patton, Renn, 2010; Baxter Magolda, 2001).

SSA also builds upon the concept of "Mindtools," that is, any technological affordance such as computer hardware or software designed to support learning experiences and to engage and or enhance multiple forms of thinking, especially in constructivist learning environments (Jonassen, 1996; Success, 2006). The systems model for SSA relies on an adaptation of cultural historical activity theory (CHAT) described by Sharples, Taylor, and Vavoula (2005). In this perspective, SSA mediates between the subject (students) and the desired outcome or object, which, in the case of the current study, is student success and retention in a first-year course. This framework accounts for important local contexts by identifying "communities" in which SSA is deployed; these activity systems are represented in Figure 3 below, offering researchers a unit of analysis by which the efficacy of SSA can theoretically be quantified.
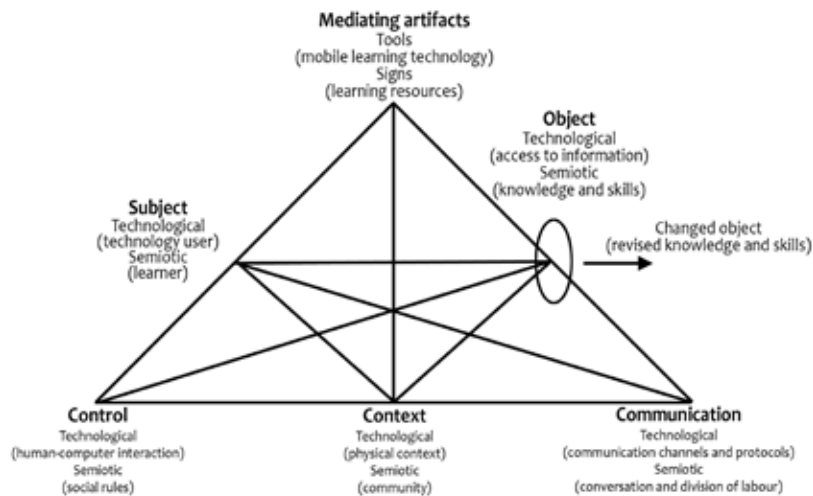

Figure 3. This "Theoretical Framework for Student Learning with SSA" provides a hypothesis of how learners can use technology to access information and acquire knowledge and skills. Adapted from Sharples, M., Taylor, J., & Vavoula, G. (2005). Towards a Theory of Mobile Learning. In Proceedings of mLearn 2005, 4th World Conference on mLearning, Cape Town, 25-28 October 2005. Retrieved from http://www.mlearn.org/mlearn2005/CD/papers/Sharples-%20Theory%20of%20Mobile.pdf and used with permission.

Design and Development

The project involved two phases for completion: (1) developing the software, and (2) designing a constructivist-learning environment for a first-year student success course at a community college. The authors used Objective-C, an object-oriented programming language with Xcode, and Cocoa Touch Framework, to write the computer code for SSA. This greatly simplified the design task; additional support for the coding and design work came from Apple's online developer forums, from the course textbook, and the course instructor (Apple, Inc., 2013; Ray, 2013). The designers chose the target school's mascot for the app's avatar to make it instantly recognizable to students. The entire project took about four weeks to complete.

Figure 4. Student point-of-view of the SSA on an iPhone simulator showing the start screen with school mascot (R. Mobius Thunderduck), menu choices, and the counseling services website. R. Mobius Thunderduck is a registered trademark of Richland College. The counseling services Website image, purple and green color, and "R" logo are registered trademarks of Richland College (2013). iPhone and iPhone simulator images are registered trademarks of Apple Inc.

The seven-step design and development process that the authors took to create the application are detailed below:

1. Form a design team with key stakeholders and involve students in the process; try a school-wide application design contest.

2. State clear goals and objectives.

3. Create a course design blueprint that embeds the application into a course with clear learning outcomes and evaluation strategies for students and the technological innovation (app).

4. Coding: create and configure the project and develop the app.

5. Use a graphic artist to create an attractive avatar for the app store.

6. Conduct a pilot test with students and other stakeholders and make changes based on feedback.

7.   Publish the app in Apple's app store.

The SSA functions as a student-success compass, pointing first-year students who are at-risk of dropping out to support resources on the Web without the need for a computer. It may also be programmed to require a response from students depending on the desired functionality. The functionality that can be programmed into the application is virtually limitless. Some options include:

• Distribution of student surveys

• Collection of user data to guide classroom instructional improvements

• Homework assignments

• Motivational messages and prompts

• Crisis counselor contact information

• Course announcements, class cancellations, emergency alerts

• Syllabi, course calendar, feedback

• Campus events and cultural calendar

Development Issues, Concerns, and Lessons Learned

With any technological innovation, challenges arise and lessons are learned in developing mobile applications. First, this SSA is designed for use with Apple's iPhone, so it is only available to users of that device. This is an important consideration for educators because it may limit the availability of the app to users of other platforms such as Android, Windows, and Blackberry (Martin, Pastore, & Snider, 2012). Second, development of the application in Apple's Xcode requires significant computer programming knowledge that may not be available in the information technology departments of some campuses. Schools may choose to contract with a developer to create an app but the cost could be prohibitive.

Conclusion

Effective application development is complex and may require significant campus resources in terms of time, personnel, and finances. However, design of meaningful learning experiences for students matters, and deployment of even minimal technologies to support developmental education and first-year students should be considered from a holistic, systemic viewpoint. Campus values and goals should be taken into consideration when developing mobile learning applications to ensure a strong fit with an institution's organizational culture and student body. Student learning—and not the mobile technology—should be the first priority and be systematically evaluated. Student involvement is also valuable in the design, development, and deployment process. While the authors successfully developed a prototype application for iPhone, its potential as a tool to promote student success and retention awaits further investigation, development, and actual deployment on a community college campus.

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Turning Portfolios into Student Success Tools in Developmental Courses

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Learning portfolios and showcase portfolios can give developmental students confidence in their learning as well as an opportunity to realize that they have control over their own learning. This paper outlines how portfolios can be helpful in developmental mathematics and English courses and offers the practical tool of portfolios to help students reflect on and document their learning. Although electronic portfolios are becoming more frequently used for documentation of student learning, paper-based portfolios may be constructive choices for enhancing students' motivation and academic skills. Paper-based portfolios are more accessible because they do not require the time and effort in learning the technology of electronic portfolios. This paper reviews how developmental students can benefit from collecting their work into a portfolio that documents the progress of their learning. The portfolio process is illustrated by a developmental mathematics course and a developmental English as a second language (ESL) course. As a result of incorporating portfolios in these two classes, students developed an awareness of self-regulated learning strategies, became invested in their own learning, and demonstrated higher scores in final assessments than students who did not complete portfolios.

Students struggle in developmental courses not only with content knowledge but also basic academic skills and habits. Just learning the content can be an effort for this student population. The difficulty is increased when they must also learn the skills required for a successful academic career. With so much happening at the same time, it is sometimes difficult for students to recognize

their progress. This progress includes integrating and documenting new knowledge as well as identifying successful learning strategies. Portfolios can be useful tools to support students in observing and reflecting on their progress and organizing the skills they are acquiring. Portfolios are most often used at higher levels for capturing capstone experiences or for first-year courses (Herner-Patnode & Lee, 2009; Lavelle, 2003). At the developmental level, simple, structured portfolios are just as beneficial. In fact, they may be even more essential in supporting student learning for students who do not have the organizational and reflective skills that a portfolio typically requires.

Electronic portfolios are becoming more popular as technology becomes more prevalent in undergraduate learning (Abrami & Barnett, 2005). Although ePortfolios can revolutionize upper-level courses by allowing the juxtaposition of multi-media pieces to create deeper meaning and promote critical reflection, we argue that paper-based portfolios still have a place in some classes where technology is either lacking or would make an already difficult course unbearable. We outline how showcase and learning portfolios have been used in elementary ESL (English as a Second Language) courses and developmental mathematics courses to help students reflect on their learning and demonstrate their mastery of skills.

Self-Regulated Learning

At the developmental level, students need to become aware of their learning and understand their roles as active learners. Self-Regulated Learning (SRL) strategies provide a framework for these students to take control of their own learning. SRL is, at its core, an awareness of how one learns and the ability to adjust when an approach does not work. SRL abilities include short-term goal setting in order to achieve long-term goals. This process includes self-monitoring, self-instruction, and self-reinforcement (Harris & Graham, 1999; Schraw, Crippen & Hartley, 2006; Schunk, 1996). In an SRL activity, a student reflects on past performance. Then, the student sets goals for the current activity, based on that reflection. Next, a student performs the activity with those goals in mind. Then the student's performance is assessed by the

teacher and the student. Based on that assessment, the student begins the SRL cycle again by understanding which strategies were successful to help in the next activity. By incorporating SRL exercises, which are then accumulated in a portfolio, students can develop their skills in monitoring progress. In this way, they realize that it is important to adjust behavior or modify goals over short time periods. In the literature, most models of SRL incorporate tenants of metacognition and self-regulation, noting that there is a direct link between motivation and self-regulation (Dinsmore, Alexander, & Loughlin, 2008; Zimmerman & Schunk 2001). Pintrich (2004) notes, "…students are attempting to change or control their motivation in order to complete a task that might be boring or difficult (396)." The case studies in this paper suggest that incorporation of SRL in a portfolio format can further benefit developmental students by providing insight into how to manage emotional reactions to difficult material and work through the material even when the motivation is low.

Several studies have documented the effectiveness of self-regulated learning strategies on student motivation and achievement. For example, Schmidtz and Wiese (2006) documented how students who kept a series of writings over time reflecting on their study habits and progress in class were more effective in achieving their academic goals than students who did not engage in reflection over time. Likewise, Stoeger and Ziegler (2007) found that students who were facilitated in reflection on their work over time demonstrated increased motivation, such as feelings of greater self-efficacy and willingness to make an effort on class assignments. The reflection and planning required by self-regulated learning, which is incorporated in portfolio creation, appeared to benefit student motivation in introductory-level college courses. Skinner and Lightner (2008) presented several classroom action-research cases that demonstrated increased student motivation and performance as a result of self-regulated learning training. In one English course, students reported increased self-efficacy in providing peer reviews and increased understanding of how peer reviews helped improve their writing. In developmental mathematics courses, where SRL activities were incorporated into portfolio format, students were given a survey

and asked to reflect on their SRL goals for the term. The survey also included questions about meeting their short-term goals and reflecting on which strategies were successful for them and which were not. While some students seemed to struggle with understanding how short-term goals were important to long-term success in the course, 83% of the responders did identify a successful learning strategy. A majority were also able to identify when during the term they were able to differentiate between successful and unsuccessful strategies.

Portfolios

Danielson and Abrutyn (1997) defined the basic types of portfolios available: working portfolios, showcase portfolios, and assessment portfolios. In the years since, these categories have been refined. What Danielson and Abrutyn called a working portfolio is now more commonly called a learning portfolio (Zubizarreta, 2004). In this type of portfolio, students keep a record of their work over time to highlight the process of learning. The showcase portfolio and the assessment portfolio sometimes merge. In this merged portfolio, students showcase their best work or final projects which are used to assess achievement of course or program outcomes. Sometimes the instructor specifies what is included, and sometimes students can choose what they want to include. Nevertheless, the portfolio is a personal project that reflects each student's personal experience of the course. When students reflect on the products in the portfolio, they are able to see their achievements more clearly. In addition, the instructor is able to more clearly see a student's individual performance of course skills.

An important issue to address is why paper portfolios are still the best choice for some circumstances. ePortfolios have become the format of choice, and those who are not yet using them are often in the process of adopting them (Dordelly-Rosales, 2010). The main advantage of ePortfolios is their flexible nature for presenting a wide range of student work, juxtaposed in meaningful ways. The main disadvantage of ePortfolios is the technology required. The hardware and software may not be available, and students do not always have the required expertise which makes

ePortfolios very difficult to pursue. As a result, ePortfolios seemed difficult to incorporate into the developmental classes outlined in this paper. Based on our experience with these students, we have used paper-based portfolios.

Using Paper-Based Portfolios: Developmental Mathematics Case Study

An important aspect of teaching mathematics is setting course objectives and assessing students' progress and success in meeting these objectives.   Exams, quizzes, and homework assignments can provide a snapshot of a student's individual achievements, but these assessments do not necessarily assist students in becoming organized and self-reflective. The use of portfolios in mathematics is an effective teaching tool that provides students opportunities to be active participants in their self-assessment regarding course objectives and developing reasoning and organizational tools. The process of creating the portfolio of work is an explicit activity that highlights organizing what they have learned and why it is important, both short-term and long-term.

For a range of developmental mathematics courses from basic mathematics skills to intermediate algebra, the instructor used an interactive teacher-student portfolio, or learning portfolio consisting of three sections: worked-out problems, corrections to exams and quizzes, and writing assignments. The portfolio aided in communication between instructor and student and promoted SRL and reflection.   Over the term at various points before the final submission, the instructor and peers reviewed and assessed assignments presented in the portfolio. In the first section of the portfolio, which focused on problem-solving skills, students were required to present two problems per section of material that would be on an upcoming exam. The choice of problems was left to the student. Students were encouraged to submit problems that provided the most insight into the course material, examples of techniques used in many other problems, and/or problems that included concepts or techniques used in other courses. The students were required to follow a template in presenting the problem modeled after Fukawa-Connelly and Buck (2010). To

ensure students understood what was being asked, the instructor also further defined each component required in the portfolio as well as the reason that component was included as part of the template.   The handout provided for the students follows. An example of student work is given in Figure 1.

Figure 1. Students use portfolio guidelines to create journal entries that reflect their understanding of selected mathematics problems.

Portfolio Guidelines
Contents

The portfolio should be presented with the following sections.

Section I. Suggested Problems
For each chapter, present two problems per section. Do not present only the simplest problems from each section. The simplest problems are generally the first problems in the section, so look further on to select your presentation problems. In deciding which problems to include, think of the problems that provide the most insight, examples of techniques that were used in many other problems, and /or problems that included concepts or techniques that were used in other courses. This should serve as a study aid and a way to create your own review sheet. The presentation of a problem should include the following five components. An example is provided below.

1) **Section title:** this is the title of the section from which the problem comes. This will give you a quick reminder of what the section and problem are about.
2) **Problem number and skill description:** This should be the problem number and a one to three sentence description of what the skill is and what it is used for. The description should be short enough that you can read it quickly and decide if you could make use of the skill to solve another problem you may work on.
3) **The problem worked out:** Include all the mathematical steps used to solve the problem.
4) **Description of the process:** Describe the process in a list of steps or in a paragraph. Be sure to indicate any key steps for this problem, or any step that caused you trouble. For example, "For the last step I looked for common factors in the numerator and denominator. I am rusty on reducing to lowest terms. I need to make sure to look for factors that are in the top and bottom to cancel out."
5) **Application or Framework:** Explain how, if you were looking at a word problem, you would know that this is a skill that could help you solve the problem. If the problem presented is a word problem, this section can be included in part 4. This section can

also include how the topics relate to material in other sections and with material outside of class.

These problems from the sections covered on the test will be due before each exam. These problems will be considered rough drafts, and your final score on the problem will not occur until you turn in the entire portfolio.

Section II. Corrected Quizzes and Exams:

All quizzes and exams should be presented with corrections on separate pages after the original. Copies of the quizzes and exams will be available on Blackboar.uc.edu. *Provide corrections on separate pages even if the correction was provided on the quiz or exam.* If you missed a quiz or exam, print out a separate copy and submit your work for the consideration as part of the portfolio. For the portfolio, you should have the quizzes and their corrections in order, then the exams and their corrections should be placed in order.

Section III. Written Assignments

All written assignments given over the quarter are presented in chronological order. The assignments will also be turned in during the quarter. You will receive credit for turning in the rough draft, either a 2 (work is done and indicates critical thinking), 1 (work is done in a superficial manner or not complete) or 0 (not much work has been done, or the work has not been done at all). Written assignments should be placed in the order in which they were assigned.

The points earned for the suggested problems and the written assignments out of the total possible points will count as one quiz grade. *Be careful if your written assignment/problems earned a 2. This does not mean that you have completed the assignment to the portfolio standard. They serve as a rough draft. Please go over assignments to answer any questions presented. Be sure to go over the Assessment of Portfolio handout. It will be used to grade your portfolio.*

Presentation

The portfolio should be a binder or a folder with pockets. For the assignments, presentation and grammar will affect your grade. I addition, if the portfolio is not presented in the correct format, it will not be graded, and you will receive a zero for the portfolio grade. All of the assignments can be hand written. The portfolio is useful to organize your work. If you keep up with the homework and are preparing for exams, the portfolio will not be difficult. Do not save all of the work until the last minute!

For the second section of the portfolio, students were required to present corrections to quizzes and exams on separate pages after the originals. Copies of required material were made available to download, and students were to provide corrections on separate pages, even if the correction was given on the quiz or exam.

The final section of the portfolio consisted of the writing assignments given during the term. These writing assignments include the SRL-specific activities as well as reflection on study skills development. Topics included the SRL cycle, study and test taking strategies, dealing with stress, time management, and reflections on common misconceptions of the material presented in class. The final writing assignment was a capstone reflection.

Often the portfolio and writing assignments are new to students in a mathematics course. Learning mathematics is generally a source of anxiety for students at the developmental level; therefore, students are often resistant. In this case study, the initial resistance from students faded away by midterm, and students commented that the portfolio allowed them to see how much they had accomplished over the term. Students need to see their success so they can gain confidence in their mathematical skills. They also need to gain confidence in themselves as capable students as demonstrated in the example of a submitted problem in Figure 2.

Figure 2. Portfolio entries demonstrate the student's understanding of poblem solving process.

A clear benefit of the portfolio and SRL activities was that students reflected more critically on their learning, and fewer students failed the course. For example in a given course the class average on the portfolio was a 76%; of those turning in the portfolio 68% passed with a C or better. While this is not ideal what is noteworthy is that of those earning a C or better, 31 % were below a C average before turning in the portfolio and taking the final exam. Another benefit of this particular portfolio framework was the periodic assessment of student writing assignments which allowed the instructor to gain deeper insight into individual student struggles and successes with the material as the course progressed.

Using Paper-Based Portfolios: ESL Case Study

In a beginning ESL course, a paper showcase portfolio was very useful in providing structured practice in reading and writing skills and also served to show students' final work for each unit in the course. This was a free, community-based, beginning-level ESL course for students with very limited English proficiency in reading, writing, listening, and speaking. The course focused on survival English skills. The portfolio functioned to provide rehearsal of the structures covered in the speaking skills portion of the class. It also structured student practice in literacy skills, such as shaping letters, writing from left to right, and on page lines. In this program, students were promoted from one level to the next based on a written test. If students were being assessed by a written test, it was essential to have the basic literacy practice of the portfolio assignments in order to support students in the program assessment.

To make these writing tasks accessible to low-proficiency second-language learners, the writing templates mirrored what the learner had just been practicing orally in a group exercise. An example of the written exercise mirroring the oral exercise would be where students had been interviewing each other about their families, then the final writing template would be the description they had practiced saying several times. A sample writing template that mirrored the spoken exercise could look like the example in Figure 3. This template was a page in the portfolio that reviewed four topics from the first half of the class.

"I am a _____. (your job) I like to eat_____
for dinner. My house is _____. I need
_____. I live with _____. (friends,
family members)"

Figure 3. ESL students complete various templates as part of a midterm review.

Each student would be supported in writing what he or she felt comfortable writing, and no student was asked to reveal information that would make him or her feel uncomfortable. In this exercise, students reviewed vocabulary from previous lessons such as professions, food, and family in a personal context. Some responses are presented in Figure 4.

Example 1:   I am a teacher. I like to eat spaghetti for dinner. I live in a house with lots of flowers. I need a cat. I live with my sister and brother, their son and daughter, and our grandparents.

Example 2:   I am an engineer. I like to eat turkey dinner. I live in a house with lots of windows. I need to clean. I have two beautiful boys and my house is a mess.

Figure 4. ESL Students respond to the portfolio review exercise.

These examples demonstrate how students contextualize and practice the very basic course material in a personal context. These were basic learners, but the templates helped them create personal paragraphs that conveyed their individuality in a way that a disconnected fill-in-the-blank worksheet might not have.

The general portfolio used in this class was a set of templates that matched the oral lesson of the day, and it also included practice in the written vocabulary items that would be included in the program-level assessment test. The cover of the portfolio was personalized by the student, often with his or her photograph, although this was not required. At the end of the program, every single student took his or her showcase portfolio home. Not one was left. Additionally, the portfolio not only helped

students increase their skills, but also seemed to increase students' motivation to attend the class. The class met three days each week for sixteen weeks. The day upon which the portfolios were used was consistently the highest attendance day each week. Finally, in the previous iteration of this beginning-level class, about half of the students were placed in the next level after taking the program-level test which was a written test. In the class that incorporated the writing practice of the showcase portfolio, all but two of the students were placed into the next level after taking the program level test. The two who did not progress to the next level did not attend class on the portfolio days, but chose to come on other days.

Paper-based portfolios were also used in a higher-level course of the same program. In this course, students who took a written pre- and post-test, demonstrated the same pattern of improvement. Six students participated in this course and completed a showcase portfolio. Every student progressed one or two levels with an average level increase of 1.5 levels. Not only did the use of portfolios in these courses support students in their success, they also addressed the need in basic English as a Second Language courses of incorporating level-appropriate writing along with the essential spoken skills students need.

Recommendations

Portfolios allow for alternative assessments that consider students as diverse learners with varying strengths and skills (Birgin & Baki, 2007). Deciding to use portfolios and actually implementing them is a different matter.   Researchers emphasize the importance of incorporating portfolios to document student learning (Burks, 2010). Regardless of college course level and specific course objectives, the instructor must provide a clear process for the preparation, use, and assessment of portfolios. A well implemented series of reflections and course products in a portfolio will enhance student's organizational and reasoning skills.

It is important for instructors to reflect on what they want students to get out of doing the portfolio. This will aid in the type of portfolio to implement. A variety of items can be included in a portfolio in order to promote and aid in assessment of student

understanding. Instructors should keep in mind that timing is essential to maximize the effectiveness. Some instructors require certain key items be included, and others allow students to choose what items best represent their learning in the course.

A portfolio is an important alternative assessment tool that is especially beneficial for students at the developmental level. The use of a portfolio reduces anxiety associated with traditional summative assessments. It also provides unique formative assessment opportunities. Done in connection with traditional assessment methods, a portfolio can provide at-risk students with a framework to be more aware of their learning as well as connect with the material presented. It is also important to consider the medium of the portfolio. In the courses presented here, paper was the best choice for the mathematics class because learning the technology required for an ePortfolios would be as overwhelming as the course content, and in the ESL course, the technology was not available.

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When Learning Is a Luxury

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Editors' Note.
The essay here by Paige Huskey is a slight departure from the articles we typically include in the Digest. However, her personal narrative resonated with us, and we suspect many of our NADE readers will relate to this piece also. With so much national, state, and local scrutiny on how and why more developmental students do not succeed, Huskey's essay puts a human face on what may too often be a conversation about numbers.

Author's note.

I dedicate this piece to Professor Lynn Mealy, who, after 28 years of teaching developmental reading, retired at the end of fall term. Her devotion, stamina, and capacity for love will continue to inspire me.

I teach developmental writing at a small, urban community college where 70% of our student population test into at least one developmental class. Our students are largely non-traditional and many come from surrounding rural areas. On the first day of class, I tell students that I am privileged and proud to be an integral part of the journey that they have decided to undertake. And I tell them that higher education can change their lives. I tell them I know because it did mine. With three children ages six and under, one with special needs, and an active duty husband who was gone more than he was home, I made the decision to go back to school and complete my degree. Although difficult, it was worth it. While my story is meant to inspire students, I have found that the problem is

not in getting them to buy into the concept that a higher education can change their lives; the problem lies in the fact that many of them do not have adequate means to devote two or more years to learning.

In a recent meeting on retention, the administration looked at the poor completion rates of our developmental education students and demanded that we do something about it. Now that the Ohio Board of Regents is calculating federal dollars based on completion rates and retention in addition to enrollment, we are projected to lose hundreds of thousands of dollars. It was hard enough keeping students in our classes when we were on the quarter system. Now because of the mandate by the Ohio Board of Regents that all colleges in Ohio be on a semester schedule, we now face even more challenges. Out of frustration, I asked, "Is it more profitable for us to enroll twenty students and lose half because of things we can't control? Or would it be wiser to screen those twenty students and then only enroll the ones whom we knew positively could complete their classes?" My questions were of course strictly theoretical because even if we could accurately screen students for finance-, transportation-, and daycare-related issues (to name a few), we still couldn't predict how those students' circumstances might change over the course of sixteen weeks. I received no answer, theoretical or otherwise.

I am still waiting.

I began to wonder how much our administration, even other faculty, really understood our developmental education student population. Of course we do get students who are underprepared academically. Perhaps they grew up in areas with sub-par schools, they didn't take school seriously, or they've been out of school for so long that they've forgotten the basics. If that is their only deficit, I am not worried about those students. The students who I am worried about make up a much larger percentage of our developmental education enrollment, probably 70-90% in any given term. These students are too varied to describe in a simple statement, so instead, I'll share with you some of the challenges faced by students in my classes this past term. These are the students for whom we are likely to lose funding. Believe me, I wish I could give you more. I wish I had answers for you and, more importantly, for them.

This is Sally's third time taking my class. She struts around in her nylon sweat suit with a permanent scowl on her face, her shoulders slumped, and her eyes hardened like steel. If I didn't know her and saw her on the street, I'd look the other way to avoid an encounter with her. Now that I know her, I relish the rare times in class when she breaks out a smile—a genuine, ear-to-ear smile. She suffers from bi-polar disorder and depression, and I've recommended multiple times that she see the college's counselor because she just can't seem to keep it together long enough to finish the term. This time as soon as she misses a class, I email her to find out what's going on. She tells me her grandmother has died, she's had a fight with her fiancé, or she's just not doing well. "I know it's hard," I tell her. "But you can't afford to not pass this class again." And with much prodding, she does pass the class. Although I'm relieved, I don't count this as a success. How many of her other instructors will take the time to email her when she starts missing class? I can only hope that she will eventually get the medical attention she needs to help her be successful in school, in life.

Charlie, a reformed addict who tells me he's been clean for eight months, is going to school to become a social worker. The first few weeks he comes to class regularly and turns in all of the assignments. He is witty and bright, a vibrant addition to class discussions. As the semester rolls on, however, he begins missing one or two classes a week until finally he stops coming altogether. On the last day of class, he shows up to take the final exam as if nothing has happened. When I ask to speak to him after class, he tells me he already knows that he will have to re-take the class and that he's been taking care of his 72-year-old mother who was recently diagnosed with dementia. He says everything is under control now and he'll do better next term. This may be true, or he may be using again. Regardless, I try not to get hopeful. I've been disappointed too many times.

Sitting in the very front and center of the class, Sally is young and painfully thin. She has not missed a class. One day I ask her to

see me after class because she has not turned in her second writing assignment. I give her an extension to complete it, but instead she just stops coming to class. That is until about two weeks before the end of the term. She shows up to class one day as if nothing has happened. We are sharing our five-paragraph essays on the topic of why students want a higher education. When everyone else has finished reading, I ask her if she has something to share. She says that she doesn't but that she wants to write about not being able to find a job. She then tells the class that the day before, on her thirtieth day of employment through a temp service, she was let go from her job for moving her car to a closer parking spot without permission. Her voice trembles as she tells us that she doesn't know what to do. She is a single mom with a four-year-old son and it is just weeks before Christmas. I ask her to see me after class so we can discuss her options. She tells me that she knows she will need to re-take the class the following term. "Don't give up;" I say with as much energy as I can muster, "Something will work out." As she leaves, I know—yes, sadly I know—I will never see her again. I imagine her son in his pajamas on a dark Christmas morning, sitting next to a barren tree and wondering why he's been placed on Santa's naughty list. What can she say to soothe him?

Charlie is in his mid-fifties and missing a few teeth, but he is clean-cut and shaven. He sits in front of the class, actively participates, and knows the answers to my questions. We are working on our third writing assignment, a letter to the editor. Many of the students will write about the crime or drug problems in their neighborhoods. Some will write about the lack of opportunities for the youth in their areas. Still others will write about the drug addicts overcrowding the emergency room in the new hospital. Charlie hangs back after class and tells me that he wants to write about the new felony law. I ask him to explain it to me. He says that he hasn't been able to find steady employment in over five years because of his prior felony convictions but that this new law would allow him to have them hidden from public view. The problem, he says, is that it will cost about $2,000 to do this. "How am I supposed to come up with the money if I can't get a job?" he asks. I take this as a rhetorical question and tell him that

I think this is a valid and worthy topic for his letter. His shoulders droop and a look of resignation comes over his face as he nods his head and leaves. I never see him again. Poof—he's gone. I think back to this moment many times and wonder how I might have responded differently if I had known that he was looking to me for answers and that this might be the last time I would see him. What could I have said to bring him back? What answer could I possibly have given him?

Sally is in her mid-forties but the numerous lines on her face, her sagging skin, and her dark roots make her look much older. In addition to working with a tutor, she stops by my office regularly to ask questions. On the day the third writing assignment is due, she comes to me after class and explains that she is having a hard time with her full load of classes now that she has had to take on a second job since her husband was recently laid off. She explains that she has also recently gotten custody of a grandchild since her daughter was admitted to rehab. I can tell she is about to start crying. I tell her I know it is hard and I do not envy her position. I give her an extension and tell her to keep me posted if anything else happens. A couple of weeks before the end of the term, she stops into my office and announces matter-of-factly, "I did it. I'm all caught up and I'm passing all of my classes." I jump up from my desk and hug her tight, congratulating her. I can tell she is a little taken aback by my overzealous response. She can't possibly know that I will hang on to this moment for months, maybe years to come. She just may make it.

Quiet and polite, Charlie is probably in his late twenties. He sits in the back of the classroom but watches everything. At the end of every class on his way out the door, he smiles shyly, waves to me, and says, "Thank you." His work is average but shows improvement over the course of the term. When I read his final essay on why he wants a higher education, he writes about a struggling childhood, growing up with a single mom who could barely make ends meet. He talks about ending up in prison and then being homeless for a time when he first got out. Now he has a son on the way, he says, and he will do whatever it takes to make sure his child has a different upbringing. I've read this ending a million times. The circumstances leading Sally and Charlie here

are never exactly the same, but the ending always is: they want a brighter future for themselves and their families. I want to believe he—they—will make it, but sadly I know it is too soon to tell and the odds are against them.

I could go on. And back when I first started teaching, I truly believed my story was similar to theirs. I thought if I could do it, so could they. Now I know different. What I don't tell my students on the first day of class is that my husband's military career provided us with a nicer home on base than we would ever have been able to afford on our own. And living on base meant that we didn't have to worry about seedy or corrupt landlords or drugs, thieves, and sex offenders in our neighborhoods. We also had access to affordable, government-subsidized childcare. We never had to worry about lay-offs or whether or not we could afford to take our children to the doctor. We may have eaten more Hamburger Helper during those years, but we never, ever went without food. Furthermore, my parents, who are retired and lived six hours away at the time, came for prolonged visits when my husband was deployed. They also bought me a nice, used van so that I wouldn't have to worry about transportation issues because they were determined to see me succeed as the first person in our family to earn a college degree. In short, my story is nothing like that of my students'.

The truth is that most of the students like the ones I've described, once gone, never come back. Poof—just like that— vanished forever. "So," you ask, "how do we get them in college and keep them there? Please tell us." Believe me, I wish I could. I wish I had answers. Do you feel my frustration? More importantly, do you feel their frustrations? I hope so. Because the only way we can begin to formulate solutions to this critical problem is to understand our student population, truly understand them as individuals, not just as percentages and categories. Sally and Charlie are real people whose problems are vast and diverse and not easily overcome, which is why state-wide mandates and cookie-cutter programs and plans dictated by administration are probably not in their best interest. What I fear most about the Ohio Board of Regent's decision to base federal dollars on retention and completion rates, in addition to enrollments, is that our administration, in an effort to reduce our losses, will find ways—

whether explicit or otherwise—to discourage these students from even giving college a try. Their lives are hard enough, I think. They need answers, not more problems or obstacles. Instead we must try to develop solutions that are just as vast and diverse as our students' problems are.

About mid-way into the term, I had the rare opportunity to run into a student who had previously disappeared. I was at a local comedy club when she approached me. Sally had been a good student, motivated and keen. I asked her how her classes were going or if she was done since there'd been no indication when she was in my class that she was struggling. Her eyes immediately lost their sparkle as she told me that she'd had to stop taking classes a long time ago because her "baby daddy" wasn't helping her with childcare anymore. I was stunned. Her boyfriend chimed in to say how ironic it was that they had run into me because he'd been trying to get her to go back to school for some time. "Yes," I told him, "she has a lot of potential. She needs to get back to school." I put extra emphasis on "needs" and thought if I planted the seed in her boyfriend's mind, he'd stay on her, help her find her way back. The show was about to start, so I took a business card out of my wallet and handed it to Sally, asking her to come see me in the next couple of weeks so that we could discuss her options. As the lights in the room dimmed, I watched her eyes regain their brightness and she nodded enthusiastically in agreement. I dared to hope.

Months have passed. I continue to watch for Sally at my door, yearning to see the sparkle in her eyes again. Charlie has not come back either.

I am still waiting.

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