

BUILDING AN EFFECTIVE ONLINE PEER TUTORING PROGRAM AT TRADITIONAL UNIVERSITIES

THOMAS J. MASON, Ed.S, M.Ed., B.S.

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Abstract: As traditional universities continue to expand online offerings, tutoring support for this diverse student population is an important consideration for student success. While peer-tutoring programs for campus students are well-established, the online modality requires systems and training to help promulgate clear communication and a sense of collaborative learning. Academic success for struggling online students is facilitated through online tutoring. An online tutoring system can also support traditional students, who are increasingly more comfortable with online interaction. Aspects to building a robust and effective online peer-tutoring system staffed by campus peer-tutors include: finding the right scheduling interface, enhancing synchronous sessions through sharing technologies, hiring and training peer tutors for online sessions, and use of social media.

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Online higher education continues to grow. Despite some who question the necessity of a college degree (Andersen, 2012; Stainburn, 2013), and may even offer money for students to withdraw from college (Thiel Foundation, 2014), recent reports validate the value of a college degree (Benson, A., Esteva, R. & Levy, F.S. (2013). A growing respect for the online education modality has resulted in 32 percent of college students taking at least one online course (Allen & Seaman, 2013). Some students will need academic support in the form of tutoring. An online tutoring program can serve both online students and today's digital native traditional students. How can higher education institutions offer online tutoring that increases student success and is cost-effective?

BACKGROUND

Beyond the experiences of students, both the general population and college administrators report positive regard for online education. Zimmer (2014) cited a Gallup poll in which increasing numbers of United States citizens began to view online education "as good or better" than traditional colleges. Rising from 30 percent in 2011 to 37 percent in 2013, U.S. citizens' confidence in the quality of online education gained greater traction. College leaders' positive opinions of online education also grew -- from 57.2% in 2003 to 71.4% ten years later (Allen & Seaman, 2016, p5). Allen and Seaman did report an overall drop in Chief Academic Officers' (CAO's) view of online learning as critical to their long-term strategy. Belief in the strategic value of online learning fell from 70.8% in 2014 to 63.3% in 2015 (Allen & Seaman, p5). A caveat to this drop is recognition that the drop was driven almost entirely by CAO's at small institutions and institutions offering no online courses. For large institutions with established distance learning programs, the strategic criticality of online education was measured at 77.2% in 2014 and 77.1% in 2015 by their CAO's (p22).

INTRODUCTION

With growing acceptance and enrollment in the online modality, persistence and retention efforts should include academic support for students studying in the (often) truncated online timeline.

Traditional universities expanding their online education offerings are well-positioned to build organic peer-tutoring systems from within their traditional student body. While some might contract tutoring to vendors, (ThinkingStorm, SmartThinking, BrainMass, etc.), the outcomes in programming costs and reliability may not be an efficient use of university resources. Third-party contracted tutoring costs can fluctuate based on the types of courses taught per semester and the enigmatic quality of new university entrants. Budgeting for these fluctuations is problematic. Alternatively, when students are required to bear the cost of tutoring, students may choose not to seek the help they need; reducing persistence and retention.

To avoid problems associated with third-party contracted tutoring services, universities may consider several tutoring models to build an online peer tutoring system. Computer-based tutoring, Reciprocal Peer Tutoring, and traditional dyadic models of tutoring all receive attention in current literature. Of the three, dyadic peer-tutoring has historically shown as the highest efficacy toward positive student outcomes (VanLehn, 2011).

Computer-based (intelligent) tutoring falls short of traditional methods as computer tutors can't (yet) replicate content scaffolding as well as humans (Cade, Copeland, Person, & D'Mello, 2008). Reciprocal Peer Tutoring in postsecondary education is structured so that students tutor each other, often using a computer repository to hold student-created practice questions and exercises. While this may build a sense of community, Reciprocal Peer Tutoring loses value when low-skilled students share the tutoring role, creating less useful queries and artifacts for

study (Dioso-Henson, 2012). Reciprocal Peer Tutoring is best used inside a traditional classroom where faculty can conduct checks of the exchanges.

Dyadic peer tutoring is found the most effective form of tutoring for several reasons;

- High performing students are selected as tutors,
- Tutors are familiar with university assignments, able to target their tutoring effort,
- Tutors often relate to new students more than professors due to generational propinquities
- Housing tutoring inside the university creates organic engagement between tutor, tutee and university,
- Students see the university as the source of their assistance

To effectively employ online dyadic peer-tutoring, administrators must create a scalable foundation that grows as student populations grow. Four facets of robust and effective online peer-tutoring systems include:

- Finding the right scheduling interface
- Enhancing synchronous sessions through technology
- Hiring and training peer-tutors for online sessions
- Using social media to enhance scheduling and tutoring

FINDING A SCHEDULING INTERFACE

Providing a sizeable tutoring capability requires universities ensure an adequate number of tutors are available at the right time for their students' needs. Online students, who may be anywhere in the United States or the world, seek services at all times of the day. At one southwestern university, use of backup sources of tutoring (e.g., vendor-tutoring paid for by the

university after normal tutoring hours) showed students seeking help even at 2 a.m. midweek. These peculiarly timed appointments often correlated to next-day assignment deadlines.

While cost may prohibit a university's tutoring center from staffing their center with peer-tutors at 2 a.m. on a Wednesday morning, the university can target the scheduling of tutors to meet the highest demand. Universities must employ a scheduling interface easily navigable by online students. The system should report the days of the week and times of the day most popular with student-customers. Managers use data collected by the scheduling system to fine-tune peer-tutor availability. Adjust tutoring schedules to match the highest demand periods. When a new term begins, a reinvestigation of popular tutoring times may be necessary if the college only offers high DFW courses only every other term.

Basic scheduling software can ensure ease of use when booking appointments with a tutor, but may not provide the level of detail desired by managers. Genbook (www.genbook.com) is an inexpensive and user-friendly scheduling system; however, the data available from Genbook is somewhat rudimentary. It can supply tutor appointment tallies, content area totals, and costs (if universities charge for tutoring services). For more sophisticated reporting, RedRock Software's TutorTrac system (www.go-redrock.com) provides over 35 canned reports, with other reports customized by users or through consultation with RedRock's staff. The system can track student GPA over time; comparing and measuring student progress with hours of tutoring received. TutorTrac also features single-sign-on capability, allowing students to use a university login to access tutor appointment schedules. The system can automatically generate and email reports to the tutoring center and to faculty. Of course, the price-point correlates to the functionality of each system. Genbook has a low standard annual cost that is approximately half

of TutorTrac's annual fee. TutorTrac also requires an initial setup fee. But, if reporting and measurement is important to the university, TutorTrac provides an automatic data collection.

No matter the type of system used, it should possess a journal system. Tutors use a journal system to record the topic covered, the student's reported subject matter difficulties, successes, and secondary challenges. In a large tutoring system, the student may not have the same online tutor for successive appointments. The journal permits the next tutor to prepare to tutor to the student's specific challenges. Journaling also allows tutors to collaborate on strategies to address students with particular challenges in identifiable areas. For example, when the tutor knows a student has continued difficulty with APA style, previous journal entries primes tutors to address those challenges before the session begins. The tutor may gather helpful websites to visit during the tutoring session, or email APA guides/worksheets in advance.

This essay does not endorse any particular system, but provides an overview of two popular scheduling tools. The system of choice must fit the requirements of the university.

ENHANCING SYNCHRONOUS SESSIONS THROUGH TECHNOLOGY

The ability to cover ample content and the timeliness of responses between the participants are principal considerations when selecting an online tutoring environment. Universities must ensure synchronous online interactivity between peer-tutors and student-customers to increase efficiency of each session. This functionality should expand communication beyond simple telephone or chat tutoring by using onscreen or document-sharing technology. As with the scheduling system, the online tutoring interface must ensure ease of use. Simonds and Brock (2014) commented on the differences between the "digital native" and the "digital immigrant" (Prensky, 2001) regarding the use of online technologies. Younger students (digital natives)

thrive on interactive learning, while digital immigrants are less available to the use of new technologies (Koh & Lim, 2012). Tutoring technologies must be practical for both groups.

Which form is best?

Chatrooms are an inexpensive option for online tutoring, but favor the digital native. Some commercial tutoring services (e.g., SmartThinking) have used chatrooms to provide their service. While telephonic contact with tutees increases operating expenses (when compared to a chatroom), the telephone is more synchronous than chatroom interchanges, especially for the digital immigrant. Chats, relative to phone calls, are a much slower form of communication, and therefore, tutoring. Typing time limits the rate of communication between peer-tutors and student-customers. Simonds and Brock (2014) found that digital immigrants believed computer-mediated chats to be less effective for their learning styles.

In contrast, telephone tutoring aids both digital immigrants and digital natives by enriching the peer-tutoring environment through speed, clarity, and collaboration. Tutoring by telephone removes the cumbersome nature of chat typing from the digital immigrant and increases real-time interactivity, even for the digital native. Telephones, when used in speaker mode by the student-customer, permit the use of other collaborative online tools; allowing tutees to both communicate and manipulate artifacts related to content.

Free from having to type lines of chat, students can manipulate on-screen documents or formulas in quantitative work using online websites such as Dropbox Paper, Showdocument.net, Google Docs, or A Web Whiteboard (AWW). Dropbox Paper, Show Document, and Google Docs are interactive, synchronous, internet-based document sharing platforms that permit both the peer-tutor and student-customer to synchronously mark-up documents for later amendment by the student. In each platform the work of each contributor appears in real-time as the peer

team works through lower- and higher-order writing concerns. Depending on the application, peer-tutors underline or highlight sentences requiring particular scrutiny. Google Docs is one of the most useful of these tools. The online ubiquity of Google ensures their Docs feature is accessible, whether the student prefers an online session, or chooses to travel to campus for traditional tutoring.

For math and the sciences, a shareable whiteboard such as AWW takes the place of document sharing while students maintain contact over the telephone. AWW hosts free collaborative whiteboards accessible through the internet on desktops, tablets, and smartphones. As with document-sharing applications, online whiteboards allow real-time sharing of content between two or more persons. Synchronous online whiteboards are excellent resources for tutoring in mathematics, chemistry, and physics. Some online whiteboards permit users to insert pictures (such as a financial ledger or a graph paper background), and use the colored pen options to mark key parts of an uploaded artifact. Using the telephone, tutors prompt tutees to solve equations or chart chemical reactions. Tutors observe student actions in real time, and congratulate or redirect students toward correct answers.

Online peer-tutors interviewed for this paper, typically reported the telephone and collaborative online systems gave the feeling of close proximity; being in the next room from their client. Though separated by thousands of miles, the peer-tutoring dyad can form partnerships focused on the same goal – student academic success. At the southwestern university mentioned previously, student survey feedback returned a 97.4% recommendation rate for online peer tutoring using online shared documents and screens.

HIRING AND TRAINING PEER TUTORS FOR ONLINE SESSIONS

The most important element of an effective online peer-tutoring system is the actual tutoring corps. To hire and train the best available tutors, we should consider:

- Content and tutor training
- Costs and benefits associated with a tutoring program
- Personalizing the tutoring experience

Content and tutor training

Undergraduates who were successful in campus courses are inherently well-suited for peer-tutoring the university's curriculum. Though it is important to have done well in any course for which they will tutor, equally important is the peer-tutor's ability to empathize with student-customers. While pre-testing can gauge the content readiness of the prospective tutor, training in social aspects of tutoring follows for those who demonstrate adequate content knowledge. Agee and Hodges (2012) anthology is an excellent source of peer-tutor training and is a resource from the College Reading and Learning Association (CRLA). CRLA provides certifications of tutoring programs; particularly useful for meeting NCAA standards for student-athlete academic support. CRLA's training outline provides an excellent outline for professional development of tutors.

In addition to reasons listed at the beginning of this paper, there are other benefits to hiring tutors from the student body. It is tautological to acknowledge universities strategically benefit by retaining their brightest students. Earning money to defray college costs, gaining satisfaction from helping others, and accruing prestige as a tutor are all possible positive outcomes for those hired as tutors. Additionally, some tutors use their tutoring experiences to prepare for national examinations and certifications (NCLEX, GRE, etc.); helping themselves as they help others.

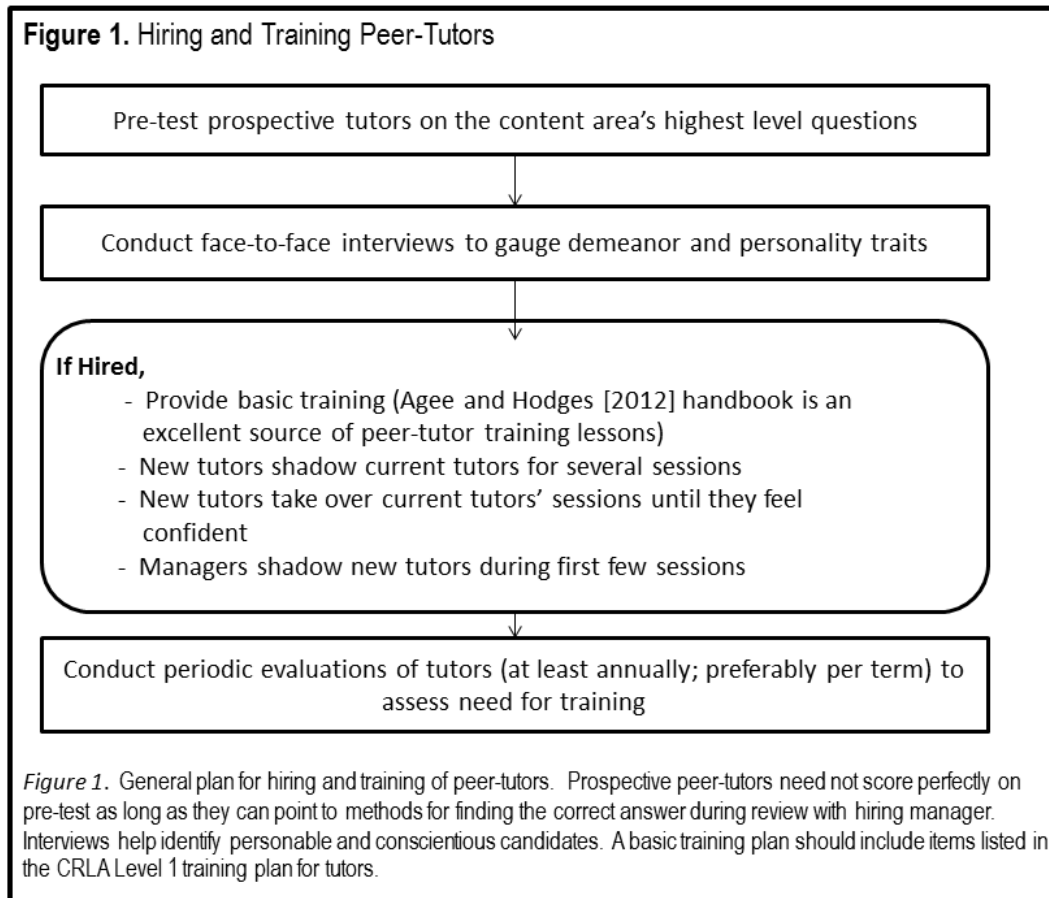
Tying personal goals to work goals is long recognized to increase motivation (Gallo, 2011).

Motivation aids satisfaction; satisfaction aids persistence.

Costs and benefits associated with a tutoring program

Cost of peer-tutoring is balanced against benefits of increased retention. Budgeting for a large online student body can be a substantial line item. However, peer-tutoring may be less revenue-negative than presumed. Administrators should expect much of the tutor's earnings to return to the university when tutors pay tuition, room, or fees. Consider also, the reduced costs to the university for employing federal and military work-studies as tutors. The federal government pays seventy-five percent of the cost for these work-studies. High achieving, low-SES work-study tutors benefit from reduced financial stress through employment while gaining social interaction, prestige of the position, and community engagement in the university setting (Hoxby & Avery, 2012) . President Obama's national appeal to facilitate college success for low-SES students (EOP, 2014) stresses tutoring as part of a full-spectrum effort to retain low-SES students. Viewed from a different perspective, success for high achieving low-SES students may come in the form of being a tutor rather than receiving tutoring.

Preparing prospective tutors for success in their role is a multi-step process. Figure 1 shows a general plan for hiring and training peer-tutors.



Personalizing the tutoring experience

A strongly recommended characteristic of a successful online peer-tutor is a high Emotional Intelligence Quotient (EQ). Because online peer-tutors cannot see facial expressions of online students (barring the use of Skype or Zoom during tutoring), hesitancy, stress, and confusion must be detectable through voice alone. High EQ also steers peer-tutors away from using certain words that may negatively impact a tutoring session. During a face-to-face interview, tutor managers must gauge the applicant's EQ while they discuss past academic performance and content knowledge.

CRLA outlines a practical regimen for tutors. Their recommended resource (Agee and Hodges, 2012) provides “supportive communication” training in line with EQ aims. Tutor managers can build on that work by also incorporating Berne’s (1961) Transactional Analysis. For example, during tutoring, the use of the word “no” is eliminated in response to a student’s attempts to answer questions. Most professional educators recognize the word “no” as a trigger used by parents to stop certain unwanted actions. In the classroom, “no” can stop future voluntary student responses to instructor questions. In tutoring, the student must collaboratively work with the tutor to reach understanding. “No” may prompt frustration and resignation from the task. Redirecting the student toward the correct response is the preferred action of professional educators.

Similarly, second-person pronouns (“you” and “yours”) should be replaced with the first-person plural pronouns “we” and “ours” when providing direction or feedback. “We” and “our” indicate collaborative association when working on problem areas together. Second-person pronouns are also often used in the Critical-Parent ego state as described by Berne (1961). Depending on the upbringing of the tutee, second-person pronouns may have been used in the Critical-Parent ego state to tell the child “you are worthless” or “you never do anything right.” Without being able to see the impact of these second-person pronouns on tutees, peer-tutors should eliminate their usage until a positive relationship with the tutee is established. After a short time, the use of “we” and “our” become second-nature to peer-tutors.

Train peer-tutors to use several questioning techniques. Because tutors cannot observe the expression on the face of a tutee, open-ended questions are important indicators of a tutee’s readiness to move forward during tutoring. Closed-ended questions should be saved for reviews at the end of sessions to reaffirm coverage of material. Questioning is coupled with highlighting,

modeling, and scaffolding to build student understanding and, ultimately, self-efficacy. These tutoring methods are effective (Cade, Copeland, Person, & D'Mello, 2008) and transferable to the online modality.

Using Social Media to Enhance Scheduling and Tutoring

Social media makes our big world a little smaller. It connects families and friends through long distances. Social media can also increase the connection between tutoring centers and their students. The use of Facebook, YouTube, and text messaging systems are common platforms, used by many citizens. Why not use them for tutoring, as well?

Providing a Facebook page for the tutoring center allows for dissemination of daily student success tips, announcements of upcoming tutoring events (midterm and final preparations), and links to other social media platforms, such as Khan Academy's YouTube page. Tutors can post to Facebook the YouTube videos for common questions or create their own videos, solving mathematical problems similar to those frequently sought by students.

Social media can also maximize tutoring center efficiency. Remind.com (formerly Remind101) is a "freemium" text messaging platform used by many teachers. Using Remind, one creates their own "classroom", to which students can subscribe. For tutoring, setup classrooms using course designators: MAT101, MAT240, ENG101, etc. Post the links for each class to the university webpage or to Facebook. Students seeking tutoring in these subjects subscribe to links related to their desired classes. When a scheduled tutoring session finishes quickly, or the tutee does not appear for their appointment, the tutor sends a text message announcing the opening. The first student to call the center is afforded the slot. The tutor then texts the slots closure to preclude continuous calls. Filling unused tutoring openings increases opportunities to aid students and reduces tutor downtime.

Creating an effective and efficient online tutoring system is achievable for many universities. Recruiting tutors is followed by developing a scheduling system easily navigable by students. Subscribing to external scheduling and interactive learning systems equips the peer-tutor workforce with instruments for contacting and engaging the online learner. Tuckman (2007) addressed distance learning courses and how to combat social isolation. The tutor's use of collaborative, synchronous online systems, social media, and practiced techniques support student academic success through robust communication and social interaction.

Through online collaboration tools we can build learning communities. It is the sense of community that feeds engagement, which feeds academic success (NSSE, 2014), and aids retention. Training traditional students as peer-tutors takes advantage of an internally accessible, capable workforce that can help retain online and traditional learners, can be cost-effective, and provides help-seeking students with peer-tutors already successful in the institution's curriculum.

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