

Faculty Ratings for on-Line Teaching: Moving beyond the Teaching Evaluation

Thomas R. Tudor, PhD
Professor of Management
Department of Management
University of Arkansas at Little Rock, USA
2801 S. University Avenue, Little Rock
Arkansas 72204

Abstract

Teaching is difficult to evaluate fairly. Many academic institutions rely solely on the results of student teaching evaluations. Few institutions use in-class peer reviews or other more intrusive methods. The growing use of fully on-line teaching has created an opportunity to go beyond just using end of course student evaluators. This paper explores more advanced evaluation processes that are now readily available with the arrival of on-line teaching. These methods are not time extensive and can be applied consistently across varied courses. Methods discussed include the thorough review of on-line course shells, a check for updated course assessments and teaching aids, frequency and timeliness of faculty engagements, thoroughness and quality of student feedback, and the respect given to students during interactions. In addition, this paper asserts that giving advance knowledge of these standards along with the full support needed to meet them are both required to succeed with this newer and more modern on-line course evaluation approach.

Keywords: On-Line Teaching, Teaching Evaluations, Course Assessments, Faculty Engagement, Student Feedback, Student Respect, On-Line Course Support

1. Introduction

Teaching evaluations filled out by students are often the main source of information used in the evaluation of faculty teaching (Wright and Jenkins-Guarnieri (2012). Rare is the academic institution that uses in-class peer review or other more thorough approaches to teaching appraisals (Ternus et al., 2007). With the increasing use of courses that are fully on-line, an opportunity has been created to move beyond just using student teaching evaluations when evaluating faculty teaching (Ternus et al., 2007). This paper looks at these more advance methods that are readily available and have the potential to much better measure and reward teaching excellence. These methods are not time consuming and can be applied consistently across varied on-line courses. Methods discussed include the thorough review of on-line course shells, a check for updated course assessments and teaching aids, frequency and timeliness of faculty engagements, thoroughness and quality of student feedback, and the respect given to students during interactions. In addition, this paper also emphasizes that giving advance knowledge of these standards along with the full support to meet them are both critical for the success of this modern approach to evaluating on-line teaching.

2. Thorough Review of On-Line Course Shell

One of the first advantages of evaluating on-line course teaching is the convenient availability of an entire course to review after it is taught (Chao et al., 1996). Department Chairs or peer review committees can gain access to these previously taught on-line course shells (Gibson and Dunning, 2012). While each on-line course will use different learning methods depending on the academic subject, a course shell will include some combination of exams, quizzes, projects, exercises, video clips, discussion boards, or other course tools. Any on-line course should be designed for the on-line environment and not just a convenient copy of a face-to-face course (Seok, 2007; Summers et al., 2005). As far as course design, were assignments complete and understandable for an online course?

What methods were used to help students learn the material? How did these assignments and learning methods compare to best on-line teaching practices and other quality on-line courses?

To make the review easier and more accepted, there is a widely used rubric created by Quality Matters (QM) to evaluate on-line courses after they are taught. QM is nationally recognized for creating a set of standards to evaluate on-line learning and used by over 700 academic institutions (“Quality Matters,”n.d.). The QM rubric involves the evaluation of the course shell itself. Their eight standards of review include:

- Course Overview and Introduction
- Learning Objectives (Competencies)
- Assessment and Measurement
- Instructional Materials
- Learner Interaction and Engagement
- Course Technology
- Learner Support
- Accessibility

Using this rubric during the review of an on-line course shell strongly reduces claims of review bias or just evaluator opinions. Furthermore, these reviews can be completed externally by faculty peers and reviewed courses can even become QM certified if standards are met (Roehrs et al., 2013). Academic institutions can also create their own rubrics to meet their course shell review needs (Ternus et al., 2007).

3. Before Course Starts

The creation of a quality on-line course takes extensive hours over a long period of time (Borgemenke et al., 2005). In addition, there is often a learning curve as far as proper course design, on-line technological capabilities, and the use of on-line teaching tools (Macdonald and Campbell, 2012). While course design issues should be caught before a course is taught, this is not typically how the faculty teaching evaluation is handled. The evaluation of teaching is often handled at the end of a course on either a calendar or academic year basis. While not the norm, a quick review of each on-line course shell before each course is being taught is recommended. Faculty peers could be involved in this review (Gibson and Dunning, 2012). Ideally, many minor and major course concerns can be caught in advance before student complaints and before the reputation of an on-line course is damaged (Keramidas et al., 2007).

This prior review should be a priority for faculty teaching on-line for the first time and for new on-line courses that were previously just taught in the classroom. Checklists are helpful and important (Hose et al., 2012). This review should take place as soon as possible, but at a minimum during the regular faculty annual review process for the institution. In fact, it should take place for all on-line courses even if these courses are taught frequently. Why? Technology changes or upgrades might have occurred that now allow or require different or better teaching tools. A textbook might have changed for the student but course updates don’t reflect this change. Links might have stopped working and gone unnoticed. Posted university policies could be old. Video clips may not be current and might contradict; for example, there might be a short video praising a business hero that is now discredited or in prison for fraud. In other words, even a course that was previously cutting edge can become dated, which can unfairly hurt student learning and grade outcomes (Heffner and Cohen, 2005).

4. Updated Course Assessments and Teaching Aids

In this evaluation, course reviewers should also check the dates of all assessments to see when they were created or loaded. Are they all the same with only the due dates changed each semester? Using the same exams, quizzes, and projects each semester raises concerns of possible cheating (Miller and Young-Jones, 2012; Young, 2013). Another concern other than cheating is that the assessments themselves might be outdated or not fully compatible with the course learning materials (Vonderwell and Boboc, 2013). For instance, assessments that were originally created years ago might not even match the current course textbook as new editions can delete chapters, move, or completely update material. The textbook might have even changed. The result is that students are required to take assessments that do not match the teaching materials. This is not fair to the students.

How can this happen? There is a strong temptation by faculty not to update course assessments. Any new assignment or exam must not only be created but must also be uploaded and setup in the on-line platform. This takes an enormous amount of valuable time (Mupinga and Maughan, 2008).

Faculty can also forget or not know how to do these updates and mistakes can be easily made when updating. A new exam might not open, could load improperly, may pull from an old exam, or even have the wrong number of questions. In addition, this new posted exam might appear to be available but students can not actually see it. These problems can be embarrassing to the faculty member and might even hurt end-of-semester course teaching evaluations. Students often blame the professor for anything that goes wrong within an on-line course and this would include any technology issues (Noriko, 2000).

This is another reason there is a real possibility of mismatched assessments or a lack of assessment updates. Obviously, it is not easy for course reviewers to make sure assessments match the syllabus, are different each time the course is taught, and are current for the subject matter. Course reviewers might not even be familiar with the material. While this type of review will take extra time and some aspects of it will be subjective, it still should be done as part of the teaching evaluation process. At a minimum, the original assessment creation dates should be checked and questions should be asked if these dates are more than a year old.

Outdated course assessments will less likely be found when expectations for updates are made in-advance and strong technological support exists to make these updates (Seok, 2007). Fully trained on-line course support staff members that are available in-person, by phone, and email will dramatically reduce the burden on faculty to make course assessment updates each semester. This support staff should be able to help the faculty member through the process or be able to do the updates as requested by faculty. Any help from faculty peers would be appreciated too. Faculty peers teaching on-line courses understand that not all classroom assessments work well on-line and that textbooks sometimes have a limited number of assessments (such as projects, questions, cases, and exercises) that would be considered the best for on-line learning. For example, the desire to replace a case project to reduce possible teaching can be in conflict with the desire to also give students a better case project for learning than the available alternatives. In other words, faculty often pick the best assignments from their textbooks and don't want to pick the second best next time just so the assessments are different. Peers might be able to help find other suitable assignments or make recommendations on how to change current ones to reduce the possibility of cheating and perhaps to even increase learning.

5. Frequency and Timeliness of Faculty Engagement

Even if the on-line course itself is setup perfectly, the instructor might be disengaged or not very engaged during the course (Bliss and Lawrence, 2009; Galbraith and Jones, 2010; Hicks et al., 2001). Student connectedness is often critical for the best online educational success (Holley and Taylor, 2009; Park and Choi, 2009; Tyron and Bishop, 2012). In the past, faculty disengagement might not have been discovered unless complaints were made to administrators or until enrolled students rated engagement poorly on the end of the semester teaching evaluation. Even in these two situations, the faculty member might deny it and might give other reasonable possibilities for the complaints. In fact, there are students that sometimes never feel they get enough attention no matter how much the faculty member has shown engagement. Ideally, the chosen on-line course management system can track how often an instructor logs into the course, what the instructor accomplishes while logged in, and how long the instructor remains logged in.

Most tracking of instructor course engagement can be completed just by logging into the instructor's on-line course. Does the faculty member read discussion posts and make postings too? How fast are emails answered? How long does it take to grade exams, quizzes, projects, or other assignments? Are there course tools specifically setup for this course but never or rarely used by the instructor? As an example, an instructor might be required to evaluate student speeches in an on-line communication course, but a quick review discovered that the instructor gave speech grades without watching most of the speeches. As another example, a review of another course discovered that the instructor didn't check course emails for weeks. A lack of faculty engagement is frustrating to students and leads to course dissatisfaction and student disengagement (Blackmon and Major, 2012; Sieber, 2005).

Faculty disengagement can occur for the same reasons students disengage. The "out of site out of mind" trap can happen if there is no trigger to check on the on-line course that is being taught. Like students, faculty members get busy too with other life or work endeavors. Expectations of faculty for engagement might be unclear or not measured (Oslington, 2005). Although not common, universities should consider an email, text, or automatic phone call to on-line instructors that do not log into their on-line course at least every three days. Some institutions might desire daily logins during the weekday.

This reminder should also be sent to students that do not regularly log into the on-line system as this requirement should be part of the engagement and retention efforts towards students (Karaksha et al., 2013).

Retention remains a strong concern for on-line courses (Park and Choi, 2009). Many faculty engagement checks could be setup automatically so that a report is generated each semester as part of on-line teaching quality control. Any concerns should be followed-up for explanations. In some situations, a lack of engagement for a certain course tool might be legitimate. The tool might not have worked properly or the professor might have found a better way to handle a student learning issue. For example, some students might have requested to do their speeches live in front of a class instead of recording them and the professor allowed it. In this situation, these specific speeches would not have been reviewed on-line. If this alternative method still meets the course learning objectives and some students preferred it, the faculty member should be praised for offering the flexibility and student user-friendliness (Wang et al., 2013).

In addition, the instructor might not have known how to use all the course tools, the expectations for these tools, or even that some these learning tools existed. Adjuncts are sometimes hired to teach courses that have already been created by another instructor. In addition, full-time faculty might be given a new on-line course at the last minute. No one should be given an already created on-line course without training on how to teach it (Huang and Hsiao, 2012). Furthermore, expectations for engagement and the importance of timely interaction should be made clear (Lovern and Lovern, 2013; Hicks et al., 2001). For instance, if the expectation is for all emails to get a response in 24 hours or on the same day, this requirement should be listed in the syllabus and made clear to the instructors. Students place a strong value on speedy communication (Skramstad et al., 2012). If there is an expectation that faculty must participate in course discussions or should at least read all postings, this should be made clear to the instructors. In other words, all engagement expectations should not be assumed but should be clearly written and communicated.

6. Thoroughness and Quality of Student Feedback

Students sometimes complain while taking on-line courses that they do not get adequate assessment feedback (Sieber, 2005). The concern is that grades are given without explanation or little explanation. As examples, students may wonder where points were lost on an essay exam, what specific grammar, documentation, or thoroughness mistakes were made on a project, or how improvement could be made for the next assignment. Quality and timely assessment feedback is extremely important in any course (Blackmon and Major, 2012; Ferguson, 2011). Unfortunately, assessment feedback is typically harder in on-line courses because this feedback must often be typed out in the course shell to each individual student instead of written on the submitted assessments. In a regular classroom, the instructor could just return an essay exam or paper during class with all the grading markings on it as far as where points were lost and how to the student could improve in the future. In addition, overall feedback could be given orally to all students in a regular classroom with little effort. In the on-line teaching environment, the choices for student feedback get more complicated and time-consuming (Huang and Hsiao, 2012).

For required paper assignments in an on-line course, the professor could print all the papers, write extensive feedback on them, scan into pdf files, and then upload or email to each individual student. The professor could also open each paper, type notes on each, and then upload to each student. As another possibility, the professor could read each paper and type feedback with the grade in the course shell without writing it on the actual paper. Audio feedback could also be given using this last method. In addition, feedback that applies to everyone could be sent by email or posted somewhere in the course shell for viewing. Audio is again a possibility and even video and audio. In addition, the on-line course management system may allow the instructor to comment, draw, add text, or strikethrough on the submitted paper assignment to give feedback.

Whatever feedback methods are chosen, assessment feedback to students in an on-line course is often harder. Giving feedback will require new techniques versus what is typically done in a normal classroom. Training might be needed or even required to learn and utilize the best and most efficient ways to give grading feedback in on-line courses. Creativity might be helpful too. These feedback examples are certainly not the only methods available and methods used should match what is best for the specific courses and the enrolled students. New technology as developed will add even more grading feedback options. A grade with no feedback, one word feedback such as "Good", or other unhelpful feedback should not be acceptable. Appropriate feedback allows students to learn from mistakes and grow.

7. Respect Given to Students during Interactions

Students sometimes make written comments on student evaluations claiming that a professor was disrespectful, cold, mean, unprofessional, or reflective of some other negative trait (Knepp, 2012; Sieber, 2005). Often students are vague in their written comments without giving specific instances. In addition, students may just rate their professor poorly on a numerically-related “respect” question. In both situations it is hard to know how to consider these attitude ratings as part of a faculty member’s teaching evaluation. For on-line courses, however, a review of faculty internal on-line course emails to students, written comments on assignments, or recorded audio or video will better help gauge the validity of any negative “respect” ratings by students. Furthermore, developmental advice can be given to faculty as needed to hopefully correct any on-line negative attitude problems if there are problems.

These on-line reviews of faculty attitude perceptions should be already done to establish the quality of student feedback so this is not extra work from an administration standpoint. In some circumstances, the professor is vindicated as tough honest feedback was fairly given and viewed necessary but was not taken as such. In instances where the feedback or emails were not appropriate by generally accepted standards, correction action needs to be taken immediately. Faculty should receive guidance on how to exhibit enthusiasm and a caring attitude, which are sometimes more difficult online (Hill, 2014; Summers et al., 2005). In today’s media world, severe comments could get reposted to Facebook and to other public media that could embarrass the professor and the academic institution. Written, audio, or video comments that are sexual in nature, discriminatory, or harassing in relation to race, religion, national origin, color, disability, age, or gender would be the most troubling and difficult to refute. Those from different culture and backgrounds often see the world differently. Innocent jokes or comments can backfire. Emails can ruin careers.

Fortunately, some faculty communication or feedback that is perceived inappropriate by students is just misunderstood. This is particularly true for written communication as it is one dimensional. Tone or demeanor can be easily misinterpreted. Even in these situations, faculty training might be needed to improve the faculty student learning relationship, because even misunderstood communication is poor communication. Communication perceived as disrespectful hurts learning and retention because it results in on-line students reducing requests for help, information, or other feedback (Sieber, 2005). An on-line environment viewed negatively by students can impact course motivation and grades (Wang et al., 2013).

Any discovered examples of potentially inappropriate communication should be discussed with the professor along with ways to improve it. This communication should be of particular concern if the end-of-course student evaluations already reflect concerns of disrespect or other inappropriateness. Professors that make some minor on-line communication mistakes should receive additional training or guidance. Major issues that are not resolved should result in the professor’s removal from teaching on-line. Any aspects of true disrespect towards students should not be ignored.

8. Giving Advanced Knowledge of Standards and Full Support

All of these recommended new standards for evaluating on-line teaching would be unfair and likely resisted if these standards were not known in advance (Watts and Robertson, 2011). Ideally, faculty are correcting, updating, and getting help based on what is expected in the on-line classroom (Gregory and Salmon, 2013). Rubrics or checklists should be developed (Seok, 2007; Hose et al., 2005). Opportunities for peers or staff to review on-line courses before any formal evaluative efforts should become routine. Training should be available as needed with one-on-one, phone, or email support always offered. Expectations should not be given without the full support for these expectations (Shea, 2007). Examples of on-line courses that fully meet standards should be available for complete review. In other words, faculty should be able to click through sample actual courses to see the organizational design (such as course syllabi, course schedule, layout, tools used), assessment methods (such as projects, discussions, quizzes, and exams), and assessment feedback mechanisms (such as postings, comments, emails, or other communication methods).

Faculty should not only be able to read about the expected standards, but should also be able to fully examine and experience them through high quality on-line course examples (Borgemenke et al., 2013). In addition, criticisms and questions should be welcome through this process, because they can lead to improved courses and designs that better fit the specific courses of certain programs.

Academic institutions should invest in at least five model on-line courses that are continually updated based on either newly discovered or developed teaching innovations. These model courses should be chosen from different academic areas and should show examples of different designs that still meet learning standards. Video clips may also prove valuable in showing faculty how to meet any expected standards. The overall goal should be to make meeting any on-line course standards as easy as possible. The ideal result is that compliance is higher and proper learning, retention, and student satisfaction are achieved (Keramidas et al., 2007; Kranzow, 2013; Roehrs et al., 2013). For this to happen, the appropriate faculty reward incentives are needed that are both monetary and non-monetary (Oslington, 2005).

10. Conclusion

The use of on-line courses continues to grow along with the technology to teach them. Professors today often must not only know the teaching subjects but also the latest on-line instructional methods. This paper addresses the concern that on-line teaching is still typically evaluated using only student teaching evaluations. As discussed, there are now more advanced methods readily available. These advanced methods give a more accurate picture of quality on-line teaching along with the ability to better reward and demonstrate on-line teaching excellence. Teaching on-line properly is harder than in the classroom. Adding more teaching evaluative areas to better measure teaching effectiveness is extra work too.

However, these extra evaluative measures are clearly worthwhile and needed. Competition for on-line students is becoming a global one as students can be located anywhere in the world. Adjunct professors can be located anywhere too. In addition, on-line course rating sites are growing and there is also Facebook and ratetheprofessor.com. The use of more comprehensive on-line teaching evaluators creates the opportunity to better measure, evaluate, recognize, and improve faculty on-line teaching. Ideally, faculty members will become more motivated and content teaching on-line because their on-line course work is fully noticed and recognized. In addition, the more thorough evaluation of on-line teaching should also result in better student learning and educational satisfaction.

References

- Bliss CA and Lawrence B (2009) from posts to patterns: A metric to characterize discussion board activity in online courses. *Journal of Asynchronous Learning Networks* 13: 1–18.
- Blackmon SJ and Major C (2012) Student experiences in online courses – A qualitative research synthesis. *The Quarterly Review of Distance Education* 13(2): 77-85.
- Borgemenke AJ, Holt WC and Fish WW (2013) Universal course shell template design and implementation to enhance student outcomes in online coursework. *The Quarterly Review of Distance Education* 14(1): 17-23.
- Chao T, Saj T and Tessier F (2006) Establishing a quality review for online courses. *Educause Quarterly* 3: 32-39.
- Ferguson P (2011) Student perceptions of quality feedback in teacher education. *Assessment & Evaluation in Higher Education* 36(1): 51-62.
- Galbraith MW and Jones MS (2010) Understanding incivility in online teaching. *Journal of Adult Education* 39(2): 1-10.
- Gibson PA and Dunning PT (2012) Creating quality online course design through a peer-reviewed assessment. *Journal of Public Affairs Education* 18(1): 209-228.
- Gregory J and Salmon G (2013) Professional development for online university teaching. *Distance Education* 34(3): 256-270.
- Heffner M and Cohen SH (2005) Evaluating student use of web-based course material. *Journal of Instructional Psychology* 32(1): 74-81.
- Hicks M, Reid I and George R (2001) Enhancing online teaching: Designing responsive learning environments. *International Journal for Academic Development* 6(2): 143-151.
- Hill LH (2014) Graduate students' perspective on effective teaching. *Adult Learning* 25(2): 57- 65.
- Holley K and Taylor B (2008) Undergraduate student socialization and learning in an online professional curriculum. *Innovative Higher Education* 33: 257-269.
- Hosie P, Schibeci R and Backhaus A (2005) A framework and checklists for evaluating online learning in higher education. *Assessment & Evaluation in Higher Education* 30(5): 539-553).

- Huang X and Hsiao E (2012) Synchronous and asynchronous communication in an online environment – faculty experiences and perceptions. *The Quarterly Review of Distance Education* 13(1): 15-30.
- Karaksha A, Grant G, Anoopkumar-Dukie S, Nirthanan SN and Davey AK (2013) Student engagement in pharmacology courses using online learning tools. *American Journal of Pharmaceutical Education* 77(6): 1-10.
- Kerimidias CG, Ludlow BL, Collins BC and Baird CM (2007) Saving your sanity when teaching in an online environment: lessons learned. *Rural Special Education Quarterly* 26(1): 28-39.
- Knepp KA (2012) Understanding student and faculty incivility in higher education. *The Journal of Effective Teaching* 12(1): 32-45.
- Kranzow J (2013) Faculty leadership in online education: Structuring courses to impact student satisfaction and persistence. *Journal of Online Learning and Teaching* 9(1): 131-139. Available at: http://jolt.merlot.org/vol9no1/kranzow_0313.pdf (assessed 15 July 2014).
- Lovern JJ and Lovern SB (2013) Student-Initiated contact with professors: A comparison of face-to-face, hybrid, and online students. *An Interdisciplinary Journal* 26(3): 115-129.
- Mcdonald J and Campbell A (2012) Demonstrating online teaching in the disciplines - A systematic approach to activity design for online synchronous tuition. *British Journal of Educational Technology* 43(6): 883-891.
- Miller A and Young-Jones AD (2012) Academic integrity: Online classes compared to face-to-face classes. *Journal of Instructional Psychology* 39(3/4): 138-145.
- Mupinga DM and Maughan GR (2008) Web-based instruction and community college faculty workload. *College Teaching* 56(1): 17-21.
- Noriko H (2000) Student distress in a web-based distance education course. *Information, Communication, and Society* 3(4): 557-579.
- Oslington P (2005) Incentives in on-line education. *Journal of Higher Education Policy and Management* 27(1): 97-104.
- Park J and Choi HJ (2009) Factors influencing adult learners' decision to drop out or persist in online learning. *Educational Technology & Society* 12(4): 207-217.
- Quality Matters (n.d.) Quality matters program (QM) - Higher education program. Available at: <https://www.qualitymatters.org/higher-education-program> (assessed 17 June 2014).
- Roehrs C, Wang L and Kendrick D (2012) Preparing faculty to use the quality matters model for course improvement. *Journal of Online Learning and Teaching* 9(1): 52-67. Available at: http://jolt.merlot.org/vol9no1/roehrs_0313.pdf (assessed 17 June 2014).
- Shea P (2007) Bridges and barriers to teaching online college courses: A study of experienced online faculty in thirty-six colleges. *The Sloan Consortium* 11(2): 73-123.
- Sieber JE (2005) Misconceptions and realities about teaching online. *Science and Engineering Ethics* 11(3): 329-340.
- Skramstad E, Schlosser C and Orellana A (2012) Teaching presence and communication timeliness in asynchronous online courses. *Quarterly Review of Distance Learning* 13(3): 183-188.
- Seok S (2007) Standards, accreditation, benchmarks, and guidelines in distance education. *The Quarterly Review of Distance Education* 8(4): 387-398.
- Spector JM (2009) Time demands in online instruction. *Distance Education* 26(1): 5-27.
- Summers JJ, Waigandt A and Whittaker TA (2005) A comparison of student achievement and satisfaction in an on-line versus a traditional face-to-face statistics class. *Innovative Higher Education* 29(3): 233-250.
- Ternus MP, Palmer KL and Faulk DR (2007) Benchmarking quality in on-line teaching and Learning: A rubric for course construction and evaluation. *The Journal of Effective Teaching* 7(2): 51-67.
- Tryon PS and Bishop MJ (2012) Evaluating social connectedness online: The design and development of the social perceptions in learning contexts. *Distance Education* 33(3): 347-364.
- Vonderwell SK and Boboc M (2013) Promoting formative assessment in online teaching and learning. *TechTrends* 57(4): 22-27.
- Wang C, Shannon DM and Ross ME (2013) Students' characteristics, self-regulated learning, technology self-efficacy, and course outcomes in online learning. *Distance Education* 34(3): 302-323.
- Watts J and Robertson N (2011) Burnout in university teaching staff: A systematic literature review. *Educational Research* 53, 33-50.
- Wright SL and Jenkins-Guarnieri MA (2012) Student evaluations of teaching: combining the meta-analyses and demonstrating further evidence for effective use. *Assessment & Evaluation in Higher Education* 37(6): 683-699.
- Young JR (2013) Online classes see cheating go high tech. *Education Digest* 78(5): 4-8.