UNCOMMON RESULTS: THE POWER OF TEAM-BASED LEARNING IN THE LEGAL WRITING CLASSROOM

Melissa H. Weresh*

Teamwork is the ability to work together toward a common vision.
The ability to direct individual accomplishment toward organizational objectives.
It is the fuel that allows common people to attain uncommon results.
Andrew Carnegie

Fall, 2012, coming off of a year-long sabbatical, I participated in a “Changing Pedagogies” workshop at Drake University. Our charge included the directive to develop new pedagogical approaches to our fall 2012 courses. We were also expected to create a document that assessed the effects of the new pedagogy on the attainment of student learning outcomes.

In one of our initial sessions, I admitted to the group that I was participating with two goals in mind. First, I wanted to explore teaching methodologies that would encourage (force?) students to work harder. While on sabbatical I had several conversations with other faculty lamenting the apparent lack of effort and engagement of students. I have always tried to make my class interesting and engaging, but I wanted to identify techniques that would force students to do the hard work associated with learning legal analysis and communication. My second goal was to make

* © 2014, Melissa A. Weresh. All rights reserved. Professor of Law, Drake University Law School. The Author would like to thank Drake University and the members of the Changing Pedagogies working group. She would like to thank Sophie Sparrow for her generous assistance in converting to team-based learning (TBL) in the legal writing classroom. She would also like to thank Danielle Shelton for her comments on drafts of this Article. Finally, she would like to thank her editors, Brooke Bowman, TerryPollman, and Jeff Jablonski for their thoughtful contributions. Errors that remain are the Author’s own.

my teaching efforts more efficient. I use several types of formative assessment and I was concerned that some were more effective than others. For ones that were less effective, I hoped to find new ways to provide general feedback that assisted student learning, but that were not too cumbersome to include in an already labor-intensive course.

In the workshop we evaluated several emerging pedagogies, including team-based learning (TBL), problem-based learning, and threshold concepts theory. Participants were asked to select one pedagogical method to study further. We then met in groups to support and encourage the adoption of these new methodologies. Because problem-based learning seemed loosely related to aspects of our pedagogy involving the use of hypotheticals to construct writing assignments, I joined both the threshold concepts and TBL groups. The threshold concepts group was interesting and helped me reevaluate areas where students struggle, but my work with the TBL group motivated me to adapt my course to this instructional method. Therefore, over the course of the summer, I converted my first-year legal analysis and writing course to a team-based learning model. This essay provides an overview of the TBL principles I adopted in the course.

In my experience, TBL is an effective instructional method to increase student engagement and accountability, and to therefore improve their learning environment. As Professors Sophie

---

2. For example, we know that students benefit from feedback on written assignments. This, however, tends to be the most labor-intensive aspect of our teaching. Many students take that feedback and adapt it to later assignments. Some, however, either fail to understand the feedback or fail to understand how to use the feedback to improve later assignments. Supplementing that aspect of formative assessment with additional types of feedback, from both instructor and peer, seemed likely to improve student performance.


5. See generally Jan H.F. Meyer & Ray Land, Threshold Concepts and Troublesome Knowledge: Linkages to Ways of Thinking and Practising within the Disciplines, in Improving Student Learning: Ten Years On 1 (C. Rust ed., Oxford 2003) (explaining that threshold concepts theory seeks to identify concepts within a discipline that are difficult for students to master but that are essential to facilitate cognitive shift in the thinking process of one within a discipline).

6. For a further discussion of threshold concepts theory in the legal writing classroom, see Melissa H. Weresh, Stargate: Malleability as a Threshold Concept in Legal Education, 63 J. Leg. Educ. 689 (2014).
Sparrow and Margaret McCabe noted in an excellent article explaining TBL in legal education, “[p]rofessors who want to use Team-Based Learning should be prepared to spend significant amounts of time preparing before the course starts,” as well as “design[ing] and refin[ing] course components during the semester.” Nonetheless, Sparrow and McCabe identify many advantages to TBL, including its ability to promote student learning; its capacity to “[meet] the need for pedagogical innovation in legal education”; its ability to “[integrate] knowledge, skills, and values learning”; and its transparency to students. This Article will identify specific resources that can help instructors incorporate TBL in the legal writing classroom. By way of full disclaimer, some of the resources I provide here are available elsewhere. My modest goal therefore is to gather some of those resources, and share others that I developed, so that first-year legal writing professors have a handy, comprehensive resource if they seek to incorporate some elements of TBL in their teaching.

In Part I, I explain the basic TBL principles I adopted in my course. I also include several resources to help readers similarly incorporate these principles. In Part II, I address some of the positive and negative consequences of using this pedagogy in first-year legal writing instruction.

7. Sophie M. Sparrow & Margaret Sova McCabe, Team-Based Learning in Law, 18 Leg. Writing 153 (2012).
8. Id. at 175 (noting that “[w]e found out, however, that adopting this strategy can be a lot of work, at least the first time it is implemented”).
9. Id. at 162–165 (advising that “[t]he most important reason professors might adopt Team-Based Learning is that it results in better learning”).
10. Id. at 165. The authors explain six methods of mastery training for the cognitive apprenticeship, including “(1) modeling, (2) coaching, and (3) scaffolding, and the students engaging in (4) articulating, (5) reflecting, and (6) exploring.” Id. at 167–168 (citing John Seely Brown et al., Situated Cognition and the Culture of Learning, 18 Educ. Researcher 32, 40 (1989)).
11. Id. at 170–172 (explaining that “Team-Based Learning allows professors to seamlessly teach knowledge and skills; Team-Based Learning does not sacrifice ‘coverage’ of topics in order to teach ‘skills’”).
12. Id. at 172–174 (noting that “[b]ecause the professor deliberately plans each unit of learning with specific objectives in mind, students gain clear understanding of the learning objectives from the beginning of readiness assurance process”).
13. The Team-Based Learning page on the Institute for Law Teaching and Learning website has many of the resources discussed in this Article (see http://lawteaching.org/teaching/teambasedlearning/index.php). I would also like to personally acknowledge the assistance I received from Professor Sophie Sparrow. She provided characteristically generous support. In addition to directing me to many of the resources identified in this Article, she provided feedback and encouragement as I developed my course-specific resources, including quizzes and study guides, which are also discussed in this Article.
I. TBL OVERVIEW

TBL has been described as a “a learner-centered teaching strategy designed to promote students’ true understanding of a subject.”¹⁴ “[D]esigned to provide students with both conceptual and procedural knowledge” and “[t]he primary learning objective in TBL is to go beyond simply covering content and focus on ensuring that students have the opportunity to practice using course concepts to solve problems TBL.”¹⁵ The TBL planning process begins with the organization of permanent teams that are strategically formed.¹⁶ Instructors then divide the course content into units or modules, with typically five to seven per course.¹⁷ For each unit, the instructor prepares a readiness assurance process that includes guided readings outside of class, followed by individual and group quizzes in class.¹⁸ After students have completed the individual and group quizzes, the instructor concludes the readiness assurance process with a brief lecture.¹⁹ The students are then prepared to transition to application exercises that have been designed to practice the concepts addressed in the unit.²⁰

¹⁴ Sparrow & McCabe, supra n. 7, at 156 (citing L. Dee Fink, Beyond Small Groups: Harnessing the Extraordinary Power of Learning Teams, in Team-Based Learning: A Transformative Use of Small Groups in College Teaching 4 (Larry K. Michaelsen et al. eds., Stylus Publg. 2004)).
¹⁶ Id. at 8; see also infra sec. I(B).
¹⁷ Michaelsen & Sweet, supra n. 15, at 8; see also infra sec. I(C)(1).
¹⁸ Michaelsen & Sweet, supra n. 15, at 8. The authors note that the RAP consists of a short test on the key ideas from the readings that students complete as individuals; then they take the same test again as a team, coming to consensus on team answers. Students receive immediate feedback on the team test and then have the opportunity to write evidence-based appeals if they feel they can make valid arguments for their answer to questions that they got wrong.
¹⁹ Id.; see also infra sec. I(C)(2)–(3).
²⁰ Michaelsen & Sweet, supra n. 15, at 8 (explaining that “final step in the RAP is a lecture (usually very short and always very specific) to enable the instructor to clarify any misperceptions that become apparent during the team test and the appeals); see also infra sec. I(C)(4).
²¹ Michaelsen & Sweet, supra n. 15, at 8 (noting that “[o]nce the RAP is completed, the remainder (and the majority) of the learning unit is spent on in-class activities and assignments that require students to practice using the course content”); see also infra sec. I(D).
TBL has been widely used in other disciplines, “including medicine, business, sciences, law, and the humanities.” Addressing the issue of how to “apply Team-Based Learning principles to a doctrinal law school course,” Sparrow and McCabe argue that it “is an effective and transformative teaching strategy for law school courses, providing a sustainable, effective, and efficient way to teach important legal knowledge, skills, and values.”

The primary components of team-based learning I incorporated in my course included (A) course policy materials to orient students to TBL; (B) strategically-formed, permanent teams; (C) readiness assurance process materials; (D) application exercises; (E) TBL as a graded component of the course; and (F) formative assessment, including peer evaluation. Each of these components is illustrated more fully below.

A. Course Policy Materials to Orient Students to TBL

As an initial matter, I understood that it was important to introduce students to the concept of team-based learning. To the extent that TBL is an example of the “flipped classroom” it is recommended that students be provided an orientation to the pedagogy, particularly to address resistance or misunderstandings about how the technique differs from general group work. I


22. Id. at 154. The authors acknowledge their experience using TBL in a writing course, but note that their “article focuses primarily on applying it to a doctrinal course.” Id. at 155 n. 8

23. Id. at 154 (recommending “that law professors . . . [try] this approach if they seek to engage students in active and collaborative learning experiences, to have their students’ learning be the center of attention in the classroom, and to help their students’ learning improve”).

24. See id. at 157 (emphasizing that, “to an outside observer of a Team-Based Learning class, the professor may appear not to be really ‘teaching’”).


Because the roles of instructor and students are so fundamentally different from traditional instructional practice, it is critical that students understand both the rationale for using TBL and what that means about the way the class will be conducted. Educating students about TBL requires at a minimum providing them with an overview of the basic features of TBL, how TBL affects the role of the instructor and their role as students, and why they are likely to benefit from their experience in the course. This information should be printed in the course syllabus, presented orally, and demonstrated by one or more activities.

Id.

26. The key difference between TBL and general group work is that TBL is a structured, sequenced pedagogy that involves three stages of instruction. The first stage re-
also thought it was especially important to orient my students because TBL differs significantly from what law students are accustomed to in terms of instruction, particularly in the first year. For my course, I chose to include following material, which is available with other TBL resources on the Institute for Law Teaching and Learning website:27

**Team Based Learning (TBL)**

This course uses the strategy of team-based learning, which has been used for over 30 years and is implemented in 23 countries across a wide range of disciplines, including medicine, business, science, technology, and many others.

Teams mimic the professional environment and develop essential lawyering skills. In practice, you will work with others frequently to serve your clients effectively. You will work with lawyers, clients, consultants, court and agency staff, and assistants. Studies have shown that, across all disciplines, the ability to work well with others is as important to success as substantive expertise. Team-based learning develops the skills and values necessary to practice law, while also allowing you to apply class materials and get immediate feedback on your analysis.

In this course, you will be working in teams of 4-6 students; these teams will last the entire semester. Teams will be assigned during the first week of the semester. I expect each team to work

---

together effectively and efficiently; each team member is responsible for achieving these goals.

Team-based learning has two major components: individual out-of-class preparation and in-class teamwork focusing on applying the materials prepared out-of-class on exercises. You will form heterogeneous teams at the beginning of the course. Teams will develop and refine team contribution guidelines, and assess how well each member of the team contributes at various points in the semester. Below are answers to common student questions about team-based learning.

**What if I have a problem with my team?**

Try to work it out. The biggest reason that teams do not function effectively is that team members avoid conflict. Be aware that most teams take about 4-6 weeks to become truly effective. Be patient, keep the lines of communication open, and come talk to me if you have questions or concerns.

You may have addressed conflicts between teammates effectively in your previous work, service, academic, and extracurricular experiences. Address the issue with your team as you would in a professional office. Consider how you would want to hear the message if your behavior was a challenge for your teammates. If the problem is not resolved using the team contribution guidelines, talk to me, and I can suggest ways for you and your teammates to work through the problem. In the rare case of alleged student misconduct, I will likely intervene.

Finally, TBL represents 15% of your grade (see below). Though each teammate will assign points to his or her team members, I consistently monitor teams to observe professionalism. If there is evidence that a team member is using team points to lower a classmate's final grade without justification, I reserve the right to nullify the team points.
and award the professionalism grade. Awarding professionalism points is not a preferred option, as it indicates that the team was unable to work professionally.

This orientation material worked especially well because it was part of the content that was tested on a quiz the students took on the first day of class. Students had been instructed that the quiz would address both the substantive readings and the course policies. They therefore read the course policies, including the explanation of TBL, very carefully. By using a quiz designed to reinforce the benefits of TBL, I was able to begin the semester knowing that the students had a concrete introduction to TBL principles.

B. Permanent Teams That Have Been Strategically Formed

Another component of TBL is the use of strategically formed, diverse, and permanent teams. Diversity within groups is essential in order to avoid barriers to group cohesiveness, including the formation of coalitions within groups.\textsuperscript{28} Coalitions within student groups can be formed based on pre-existing relationships, or on other attributes the students have in common. TBL pioneers Larry K. Michaelsen and Michael Sweet explain

\[\text{in newly formed groups, either a previously established relationship between a subset of members in the group (such as a boyfriend and girlfriend or fraternity brothers) or the potential for a cohesive subgroup based on background factors such as nationality, culture, or native language is likely to burden a group with insider-outsider tension that can plague the group throughout the term. Because it is human nature to seek out similar others, allowing students free rein in forming their own groups practically ensures the existence of potentially disruptive subgroups.}\textsuperscript{29}\]

Having permanent teams is also an important element of TBL because the permanency may discourage members from be-

\textsuperscript{28} Michaelsen & Sweet, supra n. 15, at 10 (noting that "[c]oalitions within a group are likely to threaten its overall development").

\textsuperscript{29} Id.
coming “social loafers.” Social loafing or free-riding—essentially the tendency of some group members to allow others to do the work—can “constrain the interaction necessary for a productive learning environment [and] . . . if left unchecked, . . . can prevent the development of the social fabric that is necessary for effectively functioning learning groups.”31 Because “members of new and/or temporary groups are typically more concerned about their own personal image than that of the group and also see themselves as having little to lose if the group fails to perform effectively,”32 having permanent teams ensures that group members understand their commitment to the group.33 An effective grading system, described more fully below,34 also addresses the potential problem of free-riders.35

30. Larry K. Michaelsen et al., Designing Effective Group Activities: Lessons for Classroom Teaching and Faculty Development, 16 To Improve the Academy 373, 375–376 (1997) (available at http://digitalcommons.unl.edu/podimproveacad/385/). The authors explain that “[u]nder certain conditions, a high percentage of group members would prefer to sit back and let ‘someone else’ work on their behalf. This phenomenon[ ] [i]s known as ‘social loafing . . . .’” Id. at 375.
31. Id. “More assertive members will inevitably ‘take charge’ and, by doing so, will both reduce the need for additional input and create a sort of a ‘caste’ system in which quieter members often feel that their ideas might not be welcomed.” Id.
32. Id. The authors identify six forces that contribute to social loafing:
First, some people are naturally resistant to participation (e.g., shy). Second, others prefer to dominate a discussion. Third, members who feel they lack content knowledge of the task at hand are usually reluctant to speak because they are concerned about being seen as incompetent. Two others are especially problematic in newly formed and/or temporary groups: (1) some members are typically more concerned about their own personal image than that of the group and (2) they may see themselves as having little to lose if the group fails to perform effectively. Finally, the group task promotes social loafing when it can be completed by one member working alone and/or doesn’t require members to reach an agreement.
Id. at 375–376.
33. See id. at 376 (explaining that “as groups become more cohesive, trust and understanding typically build to the point that even naturally quiet members are willing and able to engage in intense give-and-take interactions without having to worry about being offensive or misunderstood”).
34. See infra sec. I(E) and accompanying notes.
35. Michaelsen & Sweet, supra n. 15, at 15. The authors explain [t]he other step in redesigning the course is to ensure that the grading system is designed to reward the right things. An effective grading system for TBL must provide incentives for individual contributions and effective work by the teams, as well as address the equity concerns that naturally arise when group work is part of an individual’s grade. The primary concern here is typically borne from past group work situations in which students were saddled with free-riding team members and have resented it ever since. Students worry that they will be forced to
There are a variety of strategies for creating diverse groups, including the use of questionnaires to ensure ethnic, scholastic, and undergraduate degree diversity. I chose to sort my student groups randomly, however, for a few reasons. First, my student population has been randomized based on entering credentials. I therefore had a relatively homogeneous population. Second, I wanted to begin the semester with a quiz on the very first day and therefore had little opportunity to question the students regarding undergraduate degree, years of study, prior work experience, etc. The random grouping method worked quite well, particularly because the students were placed in their groups on the first day of classes, reducing any resistance that may have been presented once student coalitions had been formed. The teams were also permanent. My first-year course spans two semesters. The students remained in permanent teams for group work over the course of the year.

C. Readiness Assurance Process

The readiness assurance process is designed to address concerns related to student accountability. These concerns may be particularly troubling for students who are new to TBL, and who have had prior unpleasant or unsuccessful experiences doing group work. The readiness assurance process was, to my mind, the most successful component of TBL. It was also the most labor-intensive modification I made but, once the materials were completed, they can be reused from semester to semester, making that preparation an efficient use of my time.

In order to craft materials for the readiness assurance process, instructors are advised to divide the course into units, or modules, and that there be no more than about six per semester.

choose between getting a low grade or carrying their less able or less motivated peers.

Id.

36. Michaelsen et al., supra n. 30, at 381 (noting that “the best activity available for building group cohesiveness and minimizing social loafing is the Readiness Assurance Process” (emphasis added)).

37. By “successful,” I am referring to my two goals in changing the course pedagogy: (1) to make the students work more diligently to learn the materials; and (2) to provide more efficient instruction.

38. Michaelsen & Sweet, supra n. 15, at 8 (noting that, in “a TBL course, students are strategically organized into permanent groups for the term, and the course content is organized into major units—typically five to seven”).
For each module, students go through a readiness assurance process. The process involves having students do directed reading outside class, then having them come to class to take an individual readiness assurance quiz (iRAQ). The individual quiz is followed immediately by a group readiness assurance quiz (gRAQ). Following the group quiz the instructor conducts a lecture that wraps up discussion of the quiz material. Students are also given an opportunity to appeal questions on the quiz. Each of these elements is described below.

1. **Dividing the Course into Modules or Units**

   While identifying course units seems quite straightforward, this was a surprisingly challenging aspect of the TBL preparation for me. I have taught this course for fifteen years and never thought of the material in terms of “units.” However, TBL is a backward design teaching methodology. Instructors start with what they absolutely want students to know at the end of the semester and design backward with those learning objectives in mind. Michaelsen and Sweet explain,

   > “Identifying objectives in advance, referred to as ‘backward design’ is the reverse of how many of us may have designed our courses, where we may have reviewed legal texts’ tables of contents, pored over texts’ hundreds of pages, divided the number of topics by the number of classes, and allocated reading assignments accordingly.”

---

39. Larry K. Michaelsen & Michael Sweet, Team-Based Learning, 128 New Directions for Teaching & Learning 41, 43 (Winter 2011) [hereinafter Michaelsen & Sweet, TBL]. The authors describe the readiness assurances phase as follows:

   1. **Prereading by students outside of class.** This includes podcasts and other forms of media.
   2. **Individual readiness assurance test (iRAT).** This is a short, basic, multiple-choice test about the preparation materials.
   3. **Team readiness assurance test (tRAT).** Once students turn in their individual tests, they then take the exact same test again, and must come to consensus on their team answers. Importantly, teams must get immediate feedback on their performance, currently best achieved using scratch-off forms in the immediate feedback assessment technique (IFAT).
   4. **Appeals.** When teams feel they can make a case for their answers marked as incorrect, they can use their course materials to generate written appeals, which must consist of (a) a clear argumentative statement and (b) evidence cited from the preparation materials.

Id.

40. These are also referred to as individual readiness assurance tests, or “iRATs.”

41. Sparrow & McCabe, supra n. 7, at 177. The authors explain that “[i]dentifying objectives in advance, referred to as ‘backward design’ is the reverse of how many of us may have designed our courses, where we may have reviewed legal texts’ tables of contents, pored over texts’ hundreds of pages, divided the number of topics by the number of classes, and allocated reading assignments accordingly.” Id. (footnote omitted).
[d]esigning a TBL course requires instructors to “think backward.” What is meant by “think backward”? In most forms of higher education, teachers design their courses by asking themselves what they feel students need to know, then telling the students that information, and finally testing the students on how well they absorbed what they were told. In contrast, designing a TBL course requires instructors to “think backward”—backward because they are planned around what they want students to be able to do when they have finished the course; only then do instructors think about what students need to know.42

Prior to using TBL, I had employed a more traditional planning model. I typically reviewed a number of textbooks to come up with a syllabus with general course goals in mind. In converting the course to TBL, I didn’t really change the syllabus, but I thought more carefully and precisely about the units, or modules, and how those could be used to punctuate the progression of the course. This was a little tricky with the course, because the units were not symmetric—some were content-based and others addressed segments of a predictive memo (rule explanation and rule application paragraphs), and were therefore more skills-based.

The following were what I ultimately identified as the units of my fall curriculum,43 which addresses predictive reasoning and memo preparation. I did not have students go through the readiness assurance cycle individually for each unit. Rather, I combined some units for the readiness assurances process, as noted below, and for two of the units, I did not employ the readiness assurance process at all.44

42. Michaelsen & Sweet, supra n. 15, at 13. The authors note that the backward design method enables the instructor to build a course that provides students both declarative and procedural knowledge (in other words, conceptual knowledge and the ability to use that knowledge in decision making). This is a useful distinction, but if you have taught only with conceptual familiarization as your goal, it can be surprisingly difficult to identify what exactly you want students to be able to do on completion of a course.

Id. The backward design aspect of TBL planning, together with the identification of course units and outcomes for each unit, may also assist instructors in preparing required assessment plans.

43. For a more detailed explanation of the content for each unit, review the unit study guides provided in Appendix 1.

44. The question presented/short answer unit appeared too straightforward to warrant the process, and the synthesis unit did not appear, at least initially, as well suited. The
2014  Uncommon Results  61

- **Unit 1**: Introduction to United States Court system (Readiness Assurance Process “RAP”)
- **Unit 2**: Rule Structures (RAP—combined with Unit 3)
- **Unit 3**: Evaluating Cases/Single Case Analysis (Pre-drafting skills) (RAP—combined with Unit 2)
- **Unit 4**: Overview and Thesis Paragraphs (RAP)
- **Unit 5**: Rule Explanation/Rule Application (RAP)
- **Unit 6**: Question Presented/Short Answer
- **Unit 7**: Synthesis
- **Unit 8**: Writing the analysis for multiple cases (RAP)

2. **Guided Readings**

   In terms of helping students prepare for each unit, I prepared a study guide to direct their attention to the readings. My students have two required texts in the fall—a legal writing textbook and an ethics supplement. I have included a sample of the study guides for each of these texts in Appendix 1. I used the study guides in the first semester to help students focus on key concepts that I planned to incorporate on the quizzes. In fact, I prepared the study guides as I prepared the related quizzes. This proved to be very beneficial, as I was able to ensure that the students were focused on aspects of the reading that would be emphasized in the quizzes. By the same token, I was able to reinforce the most pertinent concepts in the text.

3. **iRAQs/gRAQs**

   Once the students have completed readings outside of class, they are prepared to take a quiz. Most quiz examples I reviewed

---

latter is challenging for students, and difficult to teach, so I maintained my tested instruction for that unit.

45. Study guides used in a Team-Based Learning course “can also identify which questions students should be able know and apply on a closed-book readiness assurance test, helping students focus on key principles they need to learn.” Sparrow & McCabe, supra n. 7, at 184. As the authors explain, study guides may be particularly helpful for first year students. Id. at 183–184. They also note that instructors need not provide study guide materials for all course content. “Depending on the course and the students, professors may decide to provide study-guide questions for important materials throughout the course or choose to gradually limit the number of questions as students develop expertise and skill in legal reading and self-regulated learning.” Id. at 184.
included ten to twenty multiple choice questions.\textsuperscript{46} Because I teach in a fifty-minute session, I used quizzes containing five to ten questions.\textsuperscript{47} Students first take the closed-book quiz individually and then proceed to take the identical quiz in their groups. During the group quiz, they use Immediate Feedback Assessment (IF-AT) sheets, or “scratch-off” sheets, to complete the group test. An example of the IF-AT scratch-off card appears below:

\begin{center}
\includegraphics{IF-AT-card.png}
\end{center}

The IF-AT sheets are purchased as prepared forms with answer keys corresponding to a code printed on a perforated section

\textsuperscript{46} Michaeelsen recommends that multiple-choice quizzes contain eighteen to twenty questions. Larry K. Michaeelsen, \textit{Getting Started with Team-Based Learning}, in \textit{Next Big Step, supra} n. 3, at 31.

\textsuperscript{47} Because of the difficulty in drafting quizzes, and because I reuse many of the questions, I did not include sample quizzes in this article. I am happy, however, to provide samples to any instructor who contacts me privately.
at the bottom of the form. The perforated section can therefore be removed prior to giving the forms to students (but after the quiz has been keyed to the correct answer key). The correct response is revealed when the student scratches off the material over one of the possible responses and a star appears below the scratch off material. The star moves within each correct answer box to ensure that students do not attempt to scratch at the margins to reveal the correct response.

Michaelsen and Sweet describe two primary advantages of using IF-AT (scratch-off) sheets for group quizzes: (1) the sheets facilitate student understanding, and (2) the sheets promote group motivation and cohesion.48 The immediate feedback provided by the sheets enables members to correct their misconceptions of the subject matter. Finding a star immediately after scratching the choice confirms the validity of it, and finding a blank box lets them know they have more work to do. Second, it promotes both the ability and the motivation for teams, with no input from the instructor, to learn how to work together effectively.49

In my experience with TBL,50 the scratch-off IF-AT cards are an essential part of the students’ TBL experience. Educators on the TBL listserv have questioned whether some more sophisticated form of electronic quiz51 would be preferable to the IF-AT sheets and the response is a resounding “no.” Michaelsen and Sweet assert that the impact of the IF-AT sheets cannot be overstated: “The impact of the IF-AT on team development is immediate, powerful, and extremely positive. In our judgment, using the IF-ATs with the tRATs is the most effective tool available for promoting both concept understanding and cohesiveness in

48. See Michaelsen & Sweet, supra n. 15, at 18.
49. Id. As the authors further explain, the use of IF-AT forms facilitate positive group dynamics: “‘Pushy’ members are only one scratch away from embarrassing themselves, and quiet members are one scratch away from being validated as a valuable source of information and two scratches away from being told that they need to speak up.” Id.
50. By this I mean not only my implementation of the pedagogy and research associated with presentations and this article, but also my participation in the TBL listserv community.
51. For example, some have questioned whether a clicker quiz would be preferable to the more low-tech scratch-off cards.
learning teams. Anyone who does not use them will miss a surefire way to implement TBL successfully.”

For the group quiz, students must continue to scratch off until they arrive at the correct response. I instructed students that they must arrive at a consensus before they scratched the response, and that all students must weigh in on the correct response. I also instructed students that everyone had to participate, and that if one student had not spoken during group work, all others had to remain silent until that person had spoken. While I recognize that some students are introverts, it was important for the group dynamic, and for the introverts, that everyone participate. Students were aware at the beginning of the semester that they would receive feedback and a score for their participation in group work, which also assisted in encouraging participation.

In fact, I was quite pleased with the level of engagement and participation during group quizzes. My experience mimicked that described by Michaelsen and Sweet in terms of how the group test situation ensured member participation:

The benefit of the IF AT is that it provides many rounds of low-stakes, formative feedback in a very short period of time. What may be not so obvious is the extent to which the tRAT stimulates students to interact in much the same way as they would in a formal reciprocal teaching situation. In their search for correct answers, students invariably alternate in and out of a teacher’s role by asking each other the kinds of questions that the teacher normally would ask. For example, on any given question, students might ask each other to make predictions, explain their rationales for those predictions, and clarify their different understandings of the material.

Group scores were calculated based on how many attempts it took to arrive at the correct answer. The students were aware of this, and able to score their own performance, because each quiz had a cover sheet explaining the scoring process. An example of

52. Id.
53. Michaelsen & Sweet, TBL, supra n. 39, at 44.
the quiz cover sheet was taken from the Institute for Law Teaching and Learning website\textsuperscript{54} and appears in Appendix 2.

Drafting the quiz questions was not easy.\textsuperscript{55} This was especially true because the units addressed different types of material—some addressed content such as hierarchy of authority and jurisdiction, while others addressed skills such as drafting rule explanation paragraphs.\textsuperscript{56} I therefore chose somewhat different formats for the questions based upon the material in the unit. So, for example, content-based units had questions that required students to test their understanding of the underlying concepts, but skills-based units required questions that asked students to evaluate examples and select from among a number of appropriate responses.

In addition to dealing with different types of material in the units, questions had to “be challenging enough that students will need to show sufficient understanding to apply basic concepts, rather than recognize a right answer, but sufficiently achievable that most students will answer most of them accurately.”\textsuperscript{57} Finally, Michaelsen recommends that questions be properly sequenced to help students develop understanding:

[U]sing related questions that require increasingly complex levels of understanding are particularly helpful for two reasons. First, if the questions are correctly chosen and sequenced, students can learn from the questions themselves while they are taking the [readiness assurance quiz]. For example, by asking one or two recognition-type questions followed by a question that requires synthesizing the concepts from the two earlier questions students are provided with the opportunity to develop a deeper understanding of the concepts themselves. Second, questions that require higher-level thinking skills are far more likely to stimulate the kind of discussion that promotes peer teaching.\textsuperscript{58}

\begin{footnotesize}
\begin{itemize}
\item[54.] Inst. for L. Teaching & Learning, supra n. 27.
\item[55.] Sparrow & McCabe, supra n. 7, at 186 (emphasizing that “[w]riting many of these kinds of effective multiple-choice questions is difficult and time-consuming, particularly for those who have limited experience drafting them”).
\item[56.] See supra sec. I(C)(1).
\item[57.] Sparrow & McCabe, supra n. 7, at 185.
\item[58.] Larry K. Michaelsen, Frequently Asked Questions about Team-Based Learning, in Next Big Step, supra n. 3, at 226.
\end{itemize}
\end{footnotesize}
Notwithstanding these challenges, drafting the quiz questions was an effective and efficient use of my time. I had my legal writing colleagues and teaching assistants evaluate the quizzes to determine whether I had struck the appropriate balance with regard to difficulty. Reviewing my students’ performance over the course of the semester, I think I was able to achieve that. Appendix 3 contains a spreadsheet for the third quiz of the fall semester. It is admittedly the best illustration of the power of team-based learning as it reflects improvement in performance on group quizzes. The spreadsheet tracking individual and group performance on each question provided helpful feedback on my teaching resources. It therefore provides an illustration of the type of self-assessment professors can achieve by using these resources. The quizzes addressed core concepts, and the readiness assurance process motivated students to be prepared. The immediate feedback provided during group quizzes helped identify concepts that were more difficult for students, and the wrap up lecture enabled me to address areas of confusion. In this respect, the process was a more effective method to provide instruction on basic course concepts. Moreover, developing the “questions [] is an excellent investment: a professor who collects all tests at the end of that first class can revise and reuse them later.”

4. Wrap-up Lecture

During the group quizzes, I was able to walk around the room to observe the questions that were most difficult or confusing to students. I had designed the responses to be challenging; students often had to distinguish between a number of correct responses to select the best answer. For example, the call of the question was often “select the most significant criticism,” or “what would be the best improvement.” This proved to be challenging and, in some instances, frustrating for the students. Once groups had complet-

59. Sparrow & McCabe, supra n. 7, at 186. The authors advise, As with writing any kind of exam or assignment for which students will be graded, to improve the effectiveness of the questions, professors should show them to colleagues, teaching assistants, and others to check for errors and areas of confusion. In addition, focus on the important learning objectives for the material in the unit; many professors have a fear of making tests too easy, and, as a result, make them more difficult than is effective, particularly at this point in the process. Id. at 186 n. 131.
ed the quiz, and had a sense of the correct answer because of the immediate feedback sheets, I took the final ten minutes of class to go over the quiz, emphasizing details related to the substance of the question, aspects of the reading, and the competing concerns related to responses. As Michaelsen and Sweet explain, these lectures are effective because “students have been primed by feedback on the [gRAQ] to listen actively and zero in on exactly the parts of the content they do not understand.”

5. Appeals

Groups were given the opportunity to appeal if they believed that they had an appropriate response that did not correspond to my correct answer. A sample appeals form is included as Appendix 4. The appeal process language was taken from sample forms on the Institute for Law Teaching and Learning website and was described to students as follows:

As a team, you may appeal the answer. You may appeal only if the team got the answer wrong. Appeals are open-book, must be in writing, and submitted by the end of class. (See Appeal Form). If a team appeals and is successful, only that team and any individuals of that team will receive full points for the accepted alternative answer. In the appeal, you must identify the correct answer your team chose, and why that answer is the best answer. If an individual gets the answer

60. Priming is a powerful cognitive phenomenon. There has been a great deal of recent scholarship on the impact that priming has on persuasion. See e.g. Kathryn M. Stanchi, The Power of Priming in Legal Advocacy: Using the Science of First Impressions to Persuade the Reader, 89 Or. L. Rev. 305, 306 (2010) (explaining that “[p]riming refers to a process in which a person’s response to later information is influenced by exposure to prior information”). To the extent that one component of persuasion is comprehension, it stands to reason that priming can be a powerful tool in student comprehension during the readiness assurance process.

61. Michaelsen & Sweet, TBL, supra n. 39, at 45 (noting that “[a]fter the RAP, the teacher is prepared to deliver, and students are eager to receive, a highly targeted clarifying lecture”). Michaelsen and Sweet note that the format of these lectures can vary. “The ideal strategy is to conduct a class discussion in which teams that correctly answered challenging questions can explain their answers. The other strategy is that, when students’ explanations are inadequate, the teacher can deliver a straight-up corrective and/or explanatory lecture.” Id.

62. Inst. for L. Teaching & Learning, supra n. 27.
correct, and the team appeals, the individual still gets full points. Appeal results will be announced next class.\(^{63}\)

As noted, I found the readiness assurance process to be the most beneficial improvement to my course associated with TBL. The following chart, developed by Michaelsen and others,\(^{64}\) is a helpful illustration of the powerful impact of each component of the readiness assurance process:

Impact of the Readiness Assurance Process:

**Individual Accountability from:**

Completing individual exam over assigned readings prior to group exam (counts toward the course grade).

Revealing/defending individual answers during the group exam.

Preparing written appeals to justify their point of view on questions on which they influenced the group to select an incorrect answer.

**Intense Give-and-take Group Discussion from:**

Having to agree on a group answer on each test question.

Agreeing on a rationale for written appeals justifying their point of view on questions incorrectly answered during the group test.

---

63. Note that this language also appears on the cover sheet provided with each quiz. The cover sheet is attached here as Appendix 2.
64. Michaelsen et al., *supra* n. 30, at 382.
External [Meaningful] Performance Feedback from:

Immediate scoring of individual and group exams.

Posting group test scores to provide external comparisons.

Feedback and corrective input from instructor.

Rewards for Group Success from:

Group exam scores count toward course grade.

Public awareness of group exam scores.

D. Application Exercises

Once students have completed the readiness assurance phase, they are ready to proceed to application exercises. Application exercises should be designed to follow the following directives, known as the “4-S” principle:

(1) assignments should always be designed around a problem that is significant to students,
(2) all of the students in the class should be working on the same problem,
(3) students should be required to make a specific choice, and
(4) groups should simultaneously report their choices.65

My students have traditionally completed “skills exercises.” These are ungraded exercises related to a self-defense fact pattern.66 The exercises mimic the work they are doing for their graded exercise, which relates to a different fact pattern. So, for example, one of their skills exercises is a pre-drafting worksheet

designed to cull relevant information from a case addressing the self-defense problem. We go over the case worksheet in class and they are encouraged to complete a similar worksheet for the case assigned for their closed memo.

Later, they begin to prepare portions of a closed memo for the self-defense problem while they are simultaneously working on their graded closed memo problem. So, one week they prepare the overview and thesis paragraphs. The following week they prepare rule explanation and rule application paragraphs. As students progress through the semester, we add additional authorities to the skills exercise problem, requiring them to complete a pre-drafting worksheet that helps them synthesize material and, finally, revise the overview, thesis, rule explanation, and rule application assignments to result in an ungraded memo on the self-defense problem. Again, they are simultaneously working on graded assignments that mimic these skills, but that involve a different fact pattern and different legal authorities.

In past years, I would typically have a lecture/discussion relating to these skills, and I would mark their skills assignments to provide feedback. Of course, students are also encouraged, and in some instances required, to get feedback on their progress on the graded assignment as well. By using team-based learning, their preparation for the skills exercises came primarily outside of class as they read and prepared for quizzes. I was able to reinforce principles in the quizzes to help focus their attention on particular concepts. They then prepared the skills exercises outside of class, and we used class time to go over the application exercises, first in groups and then together as a class.

For example, when they completed the worksheet they came to class and met in groups to go over their responses together and to construct a model worksheet. I was able to walk around the classroom and answer questions as they worked on the group project. They then submitted the group model and I provided written feedback on that assignment, rather than individual assignments. For the drafting assignments (overview, thesis, rule explanation, rule application paragraphs), I had the groups do peer edits of one another’s work and attempt to construct model responses. Their final application exercise is one I have used for many years. I take a model example of their skills exercise memo and cut it into individual sentences. Each group is given a packet with these sentences and they then work together to place the sentences into
categories (overview, thesis, rule explanation, rule application), and they then place them in order to recreate the memo. This has always worked well as a group activity and I was able to tailor the readiness assurance process to ensure their success with this application exercise.

I did have to incorporate one additional outside instructional component, however, to ensure success with the application exercises. I noticed that, during their first drafting exercise, several students had trouble constructing the analysis based solely on their reading of the text and instruction provided by the readiness assurance process. So, I went back to slides and other instructional materials I had used in the past and I audio-annotated a PowerPoint lecture with illustrations and made that accessible to students. This exercise is another example of the flipped classroom, in which the instructor “prepares a series of online videos and online quizzes for her students—thereby conveying the information that she previously had taught in conventional lectures—and uses the newly available classroom time to interact more directly with her students by presenting them with interactive problem-solving activities, reviewing material they were finding especially difficult, and the like.” As an example of flipped instruction, the PowerPoint with embedded audio is compatible with other TBL resources provided to students outside class to prepare for quizzes and application exercises.

That feature seemed to be particularly helpful for students who were struggling and needed additional instruction. I made viewing the PowerPoint optional so that students who felt adequately prepared to complete the exercise based on their readiness assurance preparation were not required to review the material. As another positive implication, these lectures are done and

---

68. Id. The author, citing flipped classroom pioneer Daphne Koller, explained some argue that online education can’t teach creative problem-solving and critical-thinking skills. But to practice problem-solving, a student must first master certain concepts. By providing a cost-effective solution for this first step, we can focus precious classroom time on more interactive problem-solving activities that achieve deeper understanding—and foster creativity. In this format, which we call the flipped classroom, teachers have to interact with students, motivate them and challenge them.

Id. (citing Daphne Koller, Death Knell for the Lecture: Technology as a Passport to Personalized Education, N.Y. Times D8 (Dec. 6, 2011)).
can be recycled each year, making this an efficient use of my instructional time.

E. TBL as a Graded Component of the Course

Michaelsen and Sweet note, “the grading system [for a TBL course should be] designed to reward the right things. An effective grading system for TBL must provide incentives for individual contributions and effective work by the teams, as well as address the equity concerns that naturally arise when group work is part of an individual’s grade.”

Many TBL instructors allow students to suggest percentages for the graded component of the course. Also, for many TBL classrooms, the portion of the grade allocated to TBL is significant. Since this was my first year using TBL, I had concerns about allocating too much of the grade to the team activities. However, I wanted the percentage to be weighty enough to ensure preparation and participation. I elected to allocate 15 percent of the final grade to TBL. Five percent of students’ final grade was based on performance on individual quizzes, 5 percent was based on group quiz scores, and 5% was based on their peer evaluations. This allocation proved to be enough to ensure performance.

I was also aware that allocating a portion of a student grade to group work might cause students anxiety, especially if their

69. Michaelsen & Sweet, supra n. 15, at 15. The authors further explain

The primary concern here is typically borne from past group work situations in which students were saddled with free-riding team members and have resented it ever since. Students worry that they will be forced to choose between getting a low grade or carrying their less able or less motivated peers. Instructors worry that they will have to choose between grading rigorously and grading fairly.

70. Id. at 17. The authors note that instructors may attempt to alleviate student concerns about group work by directly involving the students in the discussion as to how to allocate the group work in the final grade. They explain that teams negotiate with one another to reach a consensus (all of the representatives must agree) on a mutually acceptable set of weights for each of the grade components: individual performance, team performance, and each member’s contributions to the success of the team. After an agreement has been reached regarding the grade weight for each component, the standard applies for all groups for the remainder of the course.

71. One TBL expert recommends that the TBL component constitute 30–40 percent of the course grade. See Fink, supra n. 14, at 16.
past experience with group work had not been successful. I therefore tried to make it clear to students that components of TBL, and my grading system, were specifically designed to address the problem of free riders. Notably, because portions of students' grades were based on individual performance and peer evaluation, there was significant incentive for all students to be prepared.

F. Formative Peer Assessment

Another important aspect of TBL is formative peer assessment. “Whereas members of a group feel mostly accountable to an outside authority, team members also feel accountable to each other, and peer evaluation is a mechanism by which the teacher can stimulate that experience in one’s students.”

I had the students provide formative assessment at the midpoint of the semester. I used a form that closely tracks a model provided by Michaelsen and Sweet and have included that form at Appendix 5. As Michaelsen and Sweet describe, formative feedback instruments should encourage constructive feedback. The peer assessment form therefore asks what students “appreciate” about team members as well as what they would like to “request” of team members.

72. Id. at 16. The authors explain [S]tudent anxiety based on previous experience with divided-up group assignments largely evaporates as students come to understand two of the essential features of TBL. One is that two elements of the grading system create a high level of individual accountability for pre-class preparation, class attendance, and devoting time and energy to group assignments: counting individual scores on the readiness assurance tests and basing part of the grade on a peer evaluation. The other reassuring feature is that team assignments will be done in class and will be based on thinking, discussing, and deciding, so it is highly unlikely that one or two less-motivated teammates members can put the entire group at risk.

Id.

73. Michaelsen & Sweet, TBL, supra n. 39, at 48. “Peer evaluation is the fourth and final practical element of TBL, providing students with both formative and summative feed-back from their teammates about their contributions to the team and its success.” Id.

74. Id. at 16. The authors explain

75. Id. at 49.

76. Id. at 48 (noting that “the format of feedback is important so that it is informative and not judgmental. Therefore, many TBL teachers have students fill out peer evaluation forms that ask them to express things they “appreciate” about their teammates and things they “request.””).

77. Id. (“This language is carefully chosen so as not to stimulate attacks or judgments
Once students completed the forms anonymously, they submitted them to me. I read them and had my administrative assistant read them so that we could cull any non-constructive material. We then provided each student with the peer evaluation and score from his/her team members. The feedback was generally quite good; students gave each other encouragement to continue to contribute to the group. Because the students were told that they would have to justify providing the same score to all team members, they also tended to be more critical in their scoring of teammates. Giving the formative assessment form halfway through the semester gave students an assessment of how their team members perceived their contributions. It also provided an opportunity to improve because students were aware that there would be a final assessment that also contributed to their assessment grade.

II. PROS AND CONS

There were some significant advantages to team-based learning, and I intend to continue to use the pedagogy. However, there were some challenges associated with the new pedagogy. I would be remiss if I failed to point out some obstacles that, while easy to overcome, are worth highlighting.

A. Cons

There were two primary obstacles associated with TBL. I note each below and identify the strategy I used to address them.

1. Administrative Burdens

First, there are significant administrative details associated with TBL. I had to order the IF-AT sheets and ensure that each test was keyed to the appropriate sheet. I also had to ensure that the codes associated with the key were removed before I distributed quizzes to students. I also plan to continue to use TBL, so it was important that copies of the quizzes were not available for but instead promote constructive peer feedback.

78. Id. (Michaelsen and Sweet explain, “Because the teacher knows who said what to whom, the feedback tends to be civil and constructive. However, because students do not know the specific source of the comments they receive, team members are more likely to be honest in giving negative feedback when it is called for.”).
students to take with them after class. To that end I needed to ensure that there were exactly enough individual quizzes and, if a student was absent, I needed to pull extra copies from my distribution stack.\textsuperscript{79} Individual quizzes were turned in so that the students would receive credit. Group quizzes were marked with the group name and groups were instructed that they would receive no credit for their group quiz if the quiz, together with the IF-AT form, were not returned in the group folder.

I also had to institute a procedure for make-up quizzes when students missed class. I required students to contact me prior to class if they were going to be absent. They then had to make arrangements with my administrative assistant to take the individual quiz. Because this only happened in a few instances, I did enter the student’s group score grade even though the student had not contributed to the group quiz.\textsuperscript{80}

I am fortunate to have a wonderful administrative assistant who helped prepare individual group quizzes, group folders, and group quiz materials (quiz and IF-AT sheet) for each quiz day. She also graded the individual quizzes and entered the scores for iRAQs, tRAQs, and peer assessment forms. I have attached a copy of my grade sheet at Appendix 6. The grade sheet illustrates the number of additional entries associated with TBL. These additional entries were obviously new administrative details to keep track of, and I was extremely fortunate and grateful for my administrative assistant’s assistance.

2. Student Skepticism

The other obstacle was getting students to understand and appreciate the pedagogy. TBL, as an example of the flipped classroom, is a pedagogy that relies on the students completing a great deal of work outside the classroom. Further, in contrast with traditional, lecture-based instructional instruction in the classroom,

\textsuperscript{79} Sparrow & McCabe, supra n. 7, at 186 (emphasizing that “a professor who collects all tests at the end of that first class can revise and reuse them later”).

\textsuperscript{80} This decision differed from that of many TBL practitioners. I subscribe to the TBL listserv and there was a discussion about how to handle student absences during quizzes. The consensus of the discussion seemed to be that groups be given the opportunity to vote on whether the absent group member was eligible to receive the group score that was earned in the student’s absence. I only had three make-up quizzes in the fall and, for ease of administration, simply decided to allow the absent student to receive the score earned by the student’s group in the student’s absence.
students are working on activities during class time. As a result, the instructor is not viewed as the “sage on the stage,” but rather as the “guide at the side.” Consequently, the instructor is not establishing her credibility in the traditional manner and there may be resistance, skepticism, and frustration on the part of students.

In fact, one consequence of flipping the classroom may be a complaint by students that the instructor is not teaching. Sparrow and McCabe explain

Because the focus in a Team-Based Learning course is about what the students are learning—all students spend the vast majority of class time engaging in team discussions and solving problems in their groups—to an outside observer of a Team-Based Learning class, the professor may appear not to be really “teaching.” This is deliberate; the focus of the class is not what the professor is saying but *what the students are doing*. The professor, however, has done significant work in advance to harness the power of student learning teams.

I was aware of this phenomena going in to the semester and was confident that I had spent an enormous amount of time creating an environment conducive to student learning. However, in a law school setting in which most first-year courses are taught using the Socratic method, there is a potential for skepticism on behalf of students and instructors should be aware that they are establishing credibility in a manner that likely differs from that of their colleagues.

The best way to address student skepticism is to be proactive with regard to your support of the pedagogy. This can be achieved with a candid and thorough explanation of the benefits of team-based learning in the course policies and introductory class sessions. As noted above, the instructor’s introduction of the TBL

81. *See* Sparrow & McCabe, *supra* n. 7, at 198 (citing Fink, *supra* n. 14, at 28, cautioning that “the image of a ‘guide on the side’ is also more passive than most good teachers seem to be”).

82. *Id.* at 4.

83. *See id.* at 204 (observing that “[l]egal education has its own cultural norms, which tend to be traditional and slow to change”).

84. Having now taught the course using TBL for three semesters, this is no longer an issue. As with any new teaching methodology, the instructor’s experience and confidence tend to address issues of student skepticism.
model should also directly address how the pedagogy confronts the potential free-rider issue. 85

B. Pros

Students were more engaged and prepared using this methodology. Also, classes were livelier as students worked together in teams. I did not receive any complaints on my evaluations about the use of TBL, even though my students were the only ones in the first-year writing course who were expected to prepare for and take quizzes throughout the semester. Students seemed to genuinely enjoy the group dynamic, particularly during the quizzes. I observed lots of high fives and whoops as teams selected the appropriate response. They were also highly engaged with the reading, trying to persuade one another of the correct response by reference back to the text.

I also recognized that I had a more thorough idea of how well my students understood the material. The students were given multiple opportunities in each unit to demonstrate their understanding of critical skills and content—on individual quizzes, on group quizzes, and on application exercises. This is in addition to the writing they have always done. However, in a TBL classroom, strong students were given the opportunity to assist weaker students, strengthening their understanding. Also, weaker students had more feedback on their understanding of essential concepts, from me and from their peers. Therefore, in terms of understanding and being able to articulate core concepts, I saw a vast improvement in student performance, and the TBL pedagogy was responsible for revealing this improvement.

There have been studies that document improvement in student learning when utilizing TBL. As Sparrow and McCabe explain,

Research shows that students perform better on assessments in Team-Based Learning courses and report higher satisfaction with the course. For example, a study of 178 students in medical education showed students taught using Team-Based Learning achieved 5.9% higher mean scores on their examinations when compared to their peers taught with other methods. This study showed that weaker students benefited

85 See infra sec. I(B) and accompanying notes.
at a higher rate. Similarly, in a medical ethics course, which historically had not captured students' attention, students taught using Team-Based Learning achieved improved performance and increased student engagement and satisfaction. This ethics course study also reinforced earlier findings that teams consistently outperformed individual students. The study supports the theory that group problem solving is more effective than individual problem solving.86

In addition to these findings, one instructor in a first-year English course quantified student improvement using TBL.87 The instructor found that fewer students failed the course when TBL was utilized, and that there was a significant improvement in student scores within the B range.88 The instructor concluded that “students used the team setting to scaffold themselves into a richer learning experience and knowledge base.”89

In terms of my experience and the improvement of students on individual, graded writing assignments, however, it is more difficult quantify student improvement. That may be attributable to a number of factors. First, I converted my course to TBL after a year-long sabbatical and during the first cycle of a downturn in law school applications nationwide, so a comparison between prior student cohorts, notwithstanding many years of teaching the course, was difficult. Also, while students must understand core concepts to perform effectively in legal writing, the act of writing involves many cognitive skills, including analysis and communication. While the latter can be practiced and assessed in application exercises, the readiness assurance process may not necessarily equate with improved applied performance on assignments that students must complete individually. Finally, the imposition of a mandatory first-year curve inhibited the ability to quantify student improvement based on final grades.

86. Sparrow & McCabe, supra n. 7, at 163–164 (citations omitted).
88. Id. at 155 (noting that “the number of students earning a B minus, B, or B plus almost doubled”).
89. Id.
Notwithstanding my inability to *quantify* an improvement on graded, written assignments, the pedagogy was transformative in many ways, producing uncommon results. There was certainly improvement in student preparation and engagement. There was also a demonstrable improvement on ungraded assignments. Students were more motivated to invest in ungraded assignments that their peers reviewed than in past years, when I was the only one to review ungraded assignments. As one instructor who used TBL in a first-year English course noted, application exercises that require students to share their written work with others promotes accountability: “Members of a group are accountable to the professor; members of a team are accountable to one another. With [application exercises involving writing] students are asked to take risks and hold each other accountable in group discussions on what can be a highly personal piece of writing.”

TBL was also an improvement in terms of my ability to determine and address areas that were presenting the biggest challenges to student learning. Finally, I think it is fair to assert that the classroom was more lively and engaging for me and for the students. I firmly believe that the collaborative environment of the TBL classroom, and particularly the group work on application exercises, did facilitate learning. As Sophie Sparrow and Margaret Sova McCabe explain, “Learning, both outside and inside school, advances through collaborative social interaction and the social construction of knowledge.”

**III. CONCLUSION**

I am a TBL enthusiast. While it was a lot of work converting the course, I consider that an efficient use of my time as I will be able to reuse the resources I created. Students come to class better prepared for discussion of the readings so that class time is more effective. Classes are also more engaging and energetic than

---

90. *Id.* at 150.
91. Sparrow & McCabe, *supra* n. 7, at 208 n. 60 (citing Brown et al., *supra* n. 10, at 42, which noted that “throughout most of their lives people learn and work collaboratively, not individually, as they are asked to do in many schools”). With regard to writing, specifically, Sparrow observes that “Lampert’s and Schoenfeld’s work, Scardamalia, Bereiter, and Steinbach’s teaching of writing (1984), and Palincsar and Brown’s (1984) work with reciprocal teaching of reading all employ some form of social interaction, social construction of knowledge, and collaboration.” *Id.*
in past years. Finally, I have a more thorough sense of student understanding of material.

I hope that this essay encourages you to consider implementing some TBL components in your classroom. I also hope that the resources identified here will help you get that process started.

Appendices

Appendix 1: Study Guide Questions
Appendix 2: Quiz Cover Sheet
Appendix 3: Student Performance on Quiz 3
Appendix 4: Appeals Form
Appendix 5: Peer Assessment Form
Appendix 6: Grade Sheet