Self and others in team-based learning: Acquiring teamwork skills for business

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ABSTRACT
Team-based learning (TBL) was applied within a third-year unit of study about ethics and management with the aim of enhancing students' teamwork skills. A survey used to collect students' opinions about their experience with TBL provided insights about how TBL helped students to develop an appreciation for teamwork and team collaboration. The team skills acquired through TBL could strengthen job readiness for business.

Introduction

In *Democracy and Education* John Dewey (1916/2007) observed that "not only social life demands teaching and learning for its own permanence, but the very process of living together educates" (p. 9). Dewey was fascinated by the idea that social life was productively maintained through the dependence of the individual on the group. "From a social standpoint, dependence denotes a power rather than a weakness; it involves interdependence" (Dewey, 1916/2007, p. 38). Dewey believed that the goal of education consisted in making possible the renewal of social life. Renewal occurred, in his view, through the continual practicing of skills shared by members of the social group. In line with this idea, Dewey (1922) saw more value in educating toward "practice of skill" than "for skill" (p. 72). Dewey threw a challenge to educators. Notwithstanding how much has changed in terms of educational methods and methodologies since then, Dewey's idea of practice-driven education has remained unchanged, particularly within the field of business management.

One component of education for business is concerned with producing job ready graduates with problem-solving skills. The general expectation is that business school educators must prepare business students for work, by inducting students into their future professions. To make student job ready, however, requires good educational programs. Job readiness can help close Rousseau's (2006) research-practice gap in business education, which, in her view, originates from a lack of integration of research findings in the workplace. Job readiness must be created effectively (Turner & Turner, 2015) by infusing students with a proper notion of professionalism (Trank & Rynes, 2003) and by providing opportunities for student engagement (Burch, Heller, Burch, Freed, & Steed, 2015). In the research presented here, engagement is related to teamwork. The notion of teams is central to business education and job readiness as it is within the real world of business. Attempts to design a theory of teams date back to the 1950s. Marschak (1955), for example, first attempted a scientific understanding of team performance. "We define a team as a group of persons each of whom takes decisions about something different, but who receive a common reward as the joint result of all those decisions" (Marschak, 1955, p. 128). However, to achieve common goals is no easy task, an issue that has been raised back in the 1990s and is still discussed (Brooks, 1995; Forbes, 2013). Difficulties can vary from the type of work to be done in teams to team management. Difficulties might also be caused by lack of control of team members over external factors (Marschak, 1955, p. 128). There is also a need to set priorities. Marschak, for example, argued that to understand the workings of teams, it is necessary to transcend the special interests of the individual. This necessity, however, cannot deny individual inputs. Self and others are always involved in a complex relationship, which Foucault (1981) captured in the expression *omnes et singulatim*—everyone together and each individually.

Team-based learning applied to business education

In an attempt to address the issue of job readiness and convey the importance of teams for future business professionals, team-based learning (TBL) has frequently been used to help students build team skills. TBL scholars place student teams at the centre of active learning (Biggs, 2003; Michaelsen, 2004). They aim to enhance engagement and deep learning (Sweet & Michaelsen, 2007) and collaboration (Cestone, Levine, & Lane, 2008).

In the research presented here, TBL was introduced in an undergraduate third-year capstone unit titled *Ethics and Management*. Students attended a 2-hr class once a week for the duration of the semester (12 weeks). Each student was allocated to a team that, once established, retained its members until the conclusion of the course period. The teams were created in the first class and, following TBL's pedagogical tradition, they included either five or seven members with diverse discipline backgrounds and work experience. Students were required to manage their own pre-class learning experiences individually and in teams to prepare for learning and testing. Management within the classroom included maintenance of team folders, which were provided to students in the first class. A list of the team members was printed on the folder cover to record weekly attendance. Team folders included weekly learning material, instructions related to group tasks, and individual and team tests. Each week teams were expected to nominate a team leader to register attendance, add material, and assign tasks for class activities or tests. The folders were collected every week and returned at the start of the following class. This allowed for the weekly updating of learning material and tasks. Learning material comprised the test questions to be distributed to each team member prior to the tests, additional case studies related to theory work, and extra short reading exercises to be completed in class.

The unit of study had assessments comprising individual and group tests, a group case study analysis performed in class, and the creation of a poster outside class time. The TBL tests referred to segments of learning. These segments usually spanned two weeks, during which the reading and discussion of theoretical issues occurred. Once a segment of learning was concluded, students took their tests. Hence, tests occurred every two weeks. TBL methodology considers two types of related assessment: individual readiness assurance tests (iRATs) and group readiness assurance tests (gRATs). Some scholars within the TBL literature favor the expression team readiness assurance test tRAT for what is here referred to as gRAT. Students first took the individual test for which they were allocated 15 min to answer five questions. The collected answers remained confidential. Immediately after the conclusion of the iRAT, the gRAT was administered. Students were given the same questions to answer, but this time they were expected to address them as a group effort. They were allocated 20 min. This time difference, although minimal, was intended to allow them more time to discuss in depth their possible answers and to build up group cohesion. Prescribed time allocation was introduced to help students build up effective time management skills. Students had a common interest to avoid wasting time. At the end of the time allocated, students submitted their team answer sheet addressing the five questions that were part of the test. The group case study analysis encouraged problem-solving skills. In this assignment students were also expected to deliver within a prescribed time limit. The creation of a poster was intended to help students appreciate the material impact of decision making on various business activities.

Method

Participants

Students taking this unit of study were enrolled courses in human resources management, management, accounting, finance, marketing, and international business. Of the total enrolment of 149 students, 88 (59%) were men and 61 (41%) were women.

Instrument

At the end of the semester students were surveyed by means of a questionnaire that included three groups of Likert-type questions offering responses of *agree, unsure*, and *disagree*, plus an open-ended item in which students were invited to comment about their experience of TBL in the unit of study. The first block of questions specifically addressed TBL as a teaching and learning methodology and asked students to reflect about whether TBL helped them to become more team oriented and build skills that involved communication and working with others. The second block of questions targeted issues related specifically to how the team could have an influence on how individual competence forms. In aiming to gain high marks for the team, for example, individual students indirectly learned for their own individual advantage, too. The third block of questions was concerned with the course assessments. Students were asked to whether the assessments helped students improve team competence and performance. On a more technical note, the questionnaire also asked respondents to

indicate their gender and whether they were local or international students.

Procedure

The questionnaire was distributed in the last 30 min of the final class. In line with the procedural requirements set by the university's Human Research Ethics Committee that provided ethics clearance to all research projects concerning humans, students were given the option of completing and returning the questionnaire before leaving class, or returning it to a survey mailbox placed for this purpose in the foyer of the university's library.

Results

Fifty-two students submitted the questionnaire, yielding a response rate of 35%. Most respondents answered all of the closed-ended items, with only a handful of items having a small amount of missing data from one or two respondents. Fourteen of the respondents failed to provide any information concerning their gender, but of the 38 who did, 20 were males and 18 females.

Table 1 contains the first block of items included in the survey, together with the percentage of students choosing each of the three response options. As can be seen in that table, 11 items (1–3, 5, 7–9, 13, 15, 16a, and 16e) attracted an agree response from at least 75% of the students. Inspection of these items reveals the students'

commitment to the team and their preparedness to acknowledge the value of group contribution to achieve a common goal. This indicates a propensity toward adaptation for the sake of team success.

Three additional items (4, 16b, and 18) attracted agreement from 70% to 75% of the students. These items reveal how TBL helped to strengthen individual learning for the sake of personal knowledge. This could be seen as focusing on development of personal competence within the group.

Four items (11, 12, 16d, and 17) were endorsed by between 60% and 69% of the students. In this band, the items were more concerned with the acquisition of professional skills such as time management, leadership, and academic competence. There seems also to be an endorsement of TBL in order to experience the value of group work. These items dealt with how personal improvement might help students in the execution of daily tasks and routines, thus improving personal resources. Students might have learned how to improve their individual abilities, not in isolation, but within a shared activity and public space made possible by the team.

Two items (14 and 16c) were endorsed by between 50% and 59% of the students. These items related to whether TBL helped students to cope with team failure and whether TBL was emotionally challenging. Only one item (19) attracted a low level of endorsement coupled with a moderate level of uncertainty. It concerned the students' interest in the topic of ethics.

Table 1. Questions and student responses related to TBL.[a]

Question number	Description	Agree	Unsure	Disagree
1	TBL helped me to cooperate with others more effectively	79	8	13
2	TBL helped me to reduce my competitive worries	81	15	4
3	TBL helped me to create team knowledge	81	15	4
4	TBL helped to expand my personal knowledge	73	12	15
5	TBL helped me to share success	75	12	13
6	TBL stopped me from getting good marks	15	19	66
7	TBL encourages sharing of different perspectives	88	6	6
8	TBL encourages sharing of different abilities	88	8	4
9	TBL encourages sharing of resources	82	10	8
10	TBL stops individual initiative	31	12	57
11	TBL helped me to develop leadership skills	65	23	12
12	TBL helped me to develop time management skills	68	10	22
13	TBL helped me to contribute to team success	86	6	8
14	TBL helped me to cope with team failure	51	18	31
15	TBL stopped me developing my leadership skills	10	12	78
16	Working in mixed teams was:			
16a	●useful for learning new communication skills	83	4	13
16b	●intellectually interesting	70	13	17
16c	●emotionally challenging	54	13	33
16d	●academically worthwhile	60	23	17
16e	●useful for learning people management skills	76	16	8
16f	●a waste of time	16	14	70
17	I would like another class to use TBL so I can experience this kind of team work again	62	14	24
18	TBL helped me to successfully contribute to the development of the team case study	73	15	12
19	TBL encouraged me to be more interested in the ethics subject	46	17	37
20	TBL means I have to do all the work	31	8	61

Note. TBL = team-based learning.
[a]Values are percentages.

The initial part of the survey, five negatively worded items were included. Item 6 asked students whether TBL prevented them from getting good marks (66% disagreed); Item 10 asked them whether TBL impeded individual initiative (57% disagreed); Item 15 asked whether TBL had prevented the development of leadership skills (78% disagreed); Item 16f was drafted in provocative terms by suggesting that working in teams was a waste of time (70% disagreed); and Item 20 also provocatively asked whether teamwork meant that the individual has to do the whole work (61% disagreed). Responses to most of these five questions indicate an endorsement of TBL with regard to how teamwork influenced individual performance.

The second block of questions contained nine items that directly targeted individual competence and skills acquisition through teamwork, particularly with regard to the students' understanding of what teamwork gave them and how it changed them. Item 2 (74% agreement) and Item 4 (70% agreement) indicated that the students felt that teamwork had influenced their general behavior.

This influence seems to be strengthened in Item 6 (73% agreement), which highlighted the individual members' appreciation of what was learned from the other team members. This item might also shed light on the power of the team and on the necessity for individuals to reset their worldviews through the integration of new knowledge received from others.

Item 9 (72% agreement) points to acquired abilities through teamwork. As the tests were to be taken under time constraints, students learned how to be effective together within precise deadlines. This suggests that students acknowledged that teams might ultimately have more power than do individuals in making people meet deadlines.

Only Item 1 (66%) was in the 60–70% band. This item was designed to assess the level of students' acceptance of criticism. This could be read as a positive result inasmuch as criticism was not traded within the groups, while positive behavior was stronger as shown in Item 2 discussed previously. Several comments in the open-ended section of the questionnaire told a different story for some students, as revealed subsequently.

The next group of items, consisting of Items 3, 7, and 8, attracted between 50% and 55% endorsement. Here Items 7 and 8 asked students whether they were able to let others, particularly those who were more self-confident, do the work for the whole team. These two items attracted more moderate agreement from students, but they might not be expressing negative feelings. The responses could signal that there was a high level of inclusion in the teams, and no one was forced to step back. On the other hand, they could also indicate some

resistance to group adaptability, highlighting the difficulty of balancing self-interest and other-interest; they may also express the fear to lose control over one's own conduct in giving others too much power.

Item 3 (50%) is more focused on the individual working for the team's performance. This is an item that was based on planning for team performance and team performance feedback, and it might have triggered resistance in students because performance review might have been perceived as a form of unnecessary control.

Responses to one negative item, Item 5 (69% disagreement), framed in terms that individual students did not learn from other team members, indicated students' appreciation for their experience of being a team member.

The third block of questions specifically addressed the assessments and group performance. Table 3 contains the results. Two items scored between 80% and 84%. Of these two, Item 2 was formulated in negative terms and stated that gRATs had not helped the team members work together. It attracted 80% disagreement. Item 5 attracted 84% agreement that the team assignment helped to create team knowledge.

Two items scored between 70% and 75%. These were Item 1 and Item 3, which both related to the ethical theory studied in class. Item 1 specifically referred to gRATs by enquiring whether they helped to establish some links between theory and the students' personal experience. From the responses, it seems that students were able to experience those links while preparing and taking the group tests. Item 3 included both iRATs and gRATs. Worth noting here is the attempt to elicit the students' opinions about whether iRATs and gRATs could help them to elaborate more deeply on ethical issues. TBL founders claim that team-based learning facilitates deep learning. Although further research is needed to corroborate this claim, the students seemed to support it.

In Item 6 (75% disagreement) students rejected the suggestion that the team prevented them from getting good marks, proving a strong argument in favor of teamwork. Two items attracted between 55% and 59% agreement. It seems that, according to the responses in Q4 (58%), i/gRATs did not always help reduce competitive concerns. Finally, that Item 7 (56%) scored lower than other items could mean that not all students regarded the use of a team folder favorably.

In the open-ended section of the survey, several students gave specific feedback about the tests and assessments, the effects of strong personalities in the team, cheating, and teams' free-riders. These problems were balanced out by other feedback, however. As one student observed, "It was good to share the load with team members." The continuous tests attracted positive responses

Table 2. Responses concerning what students learned as team members.[a]

Question number	Description	Agree	Unsure	Disagree
1	I learned to accept criticism from my team members	66	13	21
2	I learned to be critical without attacking other team members	74	13	13
3	I learned to make a plan in order to respond to a team performance review	50	23	27
4	I learned new ways to communicate so all team members could understand me	70	6	24
5	I didn't learn anything new from the other members of the team	21	10	69
6	I learned to take time to connect things that I learned from other team members	73	12	15
7	I learned how to let people who know more than me do the assignment so we got good marks	52	8	40
8	I learned how to let people who know more than me answer the questions	55	8	37
9	I learned how to use time management skills more effectively	72	13	15

[a] Values are percentages.

from several students because they allowed for more effective assessment of learning. Continuous assessment was described as freeing students from the anxieties of a final exam. Directly related to Item 19 in Table 1, several students declared the book used in the unit of study to be too difficult, and that might have spoiled their interest in ethics. This might be the reason why the responses to item 19 were so low. On the other hand, some other students observed that they would have preferred to dwell longer on theories of ethics.

Discussion

There was a response rate of 35%. The option given to students to return the survey after class inevitably resulted in fewer questionnaires being retuned. The response rate raises the possibility that the results are biased. Despite the possibility of bias, however, the results highlight important aspects related to TBL and the skills that can be learned by students in a TBL environment. TBL taught students to increase and share knowledge collaboratively. It also taught students new skills and to work together for a common goal.

The results from Table 1 show that through TBL students engaged productively with the team. Their readiness to engage with team activities also originated from a necessity to comply with course requirements. Despite the requirements, the results point to the students' willingness to adapt positively to team functions, which could be seen as a first step toward job readiness. In fact,

adaptation helped students cooperate and collaborate purposely. The skill that stands out here is the skill of sharing, captured in the language of the survey as the sharing of perspectives and abilities, of knowledge and failure. This part of the survey relates to one important issue discussed in the introduction and relates to the increasing importance of team performance and the delivery of joint outcomes for business.

The results from Table 2, which relate to what students learned as team members, point to behavioral techniques. It seems possible to conclude that students learned to be productive team members. Particularly worth noting here is the skill of persuasion, which in the survey is presented as the ability to criticize others in the team without attacking them. In other words, data show that students engaged with others on an equal level of respect highlighting shared leadership. Learning in groups and for groups is not easy. In social life, individuals learn their skills spontaneously or through experience, but to learn the skill of learning is an educational task. Hence, this part of the survey is linked to the notion of practice for skills versus practice of skills mentioned in the introduction.

The results from Table 3 have highlighted the value of TBL testing techniques and of the team assignments for outcome delivery as a collective experience. Data show that students understood how to learn theoretical material individually and in groups, and how to apply acquired knowledge. These two skills could be linked back to some of the issues mentioned in the introduction

Table 3. Responses concerning students' opinion about TBL and group assessments.[a]

Question number	Description	Agree	Unsure	Disagree
1	gRATs helped our team make connections between the ethical theories and our experience	70	12	18
2	gRATs did not help our team to work together	14	8	80
3	i/gRAT questions discussion helped our team work through some ethical issues	74	10	16
4	iRATs helped to reduce our team competitive worries	58	18	24
5	Team assignments helped me to create team knowledge	84	6	10
6	Team stopped me from getting good marks	12	13	75
7	The team achievement folder helped me get better marks	56	20	24

Note. gRAT = group readiness assurance test; iRAT = individual readiness assurance test; TBL = team-based learning.
[a] Values are percentages.

about the necessity for business education, particularly management education, to close the gap between theory and practice.

Conclusions

Foundational TBL exclusively focuses on the team rather than the individual. But from this research it appears that TBL has taught students how to team up and how to retain independence. Hence, the new insight gained through this research relates to this new interdependence between team and individual. If further explored, this interdependence could offer new opportunities to revisit some of the traditional TBL assumptions.

Four contributions to the literature have been made. TBL helped students acquire skills, and also practice skills. Students joining a classroom are already in possession of social skills. Academic training helps fine tune what has previously been learned consciously and unconsciously in social groups. Through TBL Dewey's idea of practice of skills has retained its significance. The second contribution refers to the contextual environment of students' decisions, which in this article is represented by the team. Turner and Turner (2015) argued that teams' performance has explicit implications for individual performance. TBL research has validated their findings. The third contribution relates to student engagement. From the survey it appears that students were engaged cognitively in class and outside class. This confirmed two of the four engagement levels developed by Burch et al. (2015). No doubt course and assessment requirements helped increase engagement. This would validate Wresch and Pondell's (2015) observation that student engagement is difficult to achieve without compulsory course requirements. More studies need to be done to understand the mechanics of student engagement.

Teamwork can make students job ready, but it can also provide personal benefits. A male student wrote in his open-ended section: "I really enjoyed using the team-based learning methodology. It gave me the chance to learn in a different way, consider other people's perspectives and develop leadership skills. It also gave me the opportunity to make new friends." For those who returned the survey, it seems that TBL was perceived positively, because the results showed that teams can be a conduit to self-discovery, and genuine relationships. The title of this article highlights self and others. The reason for this is that, despite the importance of teams and their value for team performance, individuals are always involved in the success of the team. In concluding this piece, it is important to mention the fourth contribution made. TBL has helped students understand leadership.

Teams have led individuals toward achieving learning goals, and have also helped individuals become more self-aware and self-leading. The forming self has ultimately enhanced teams. This finding adds value to Foucault's notions of *omnes et singulatim* as a complex exchange between self and others. The self can draw from the skills learned and shared in the team even after the team has gone. Teams go, individuals remain—and the team experience that formed their self will inform business.

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