

The benefits of team-based learning and business simulations to re-engage student learning in a large group setting

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Abstract

This paper considers the role team-based learning (TBL) and business simulations play in engaging learners in online and face-to-face settings on a large Year 1 UG first term core Business module. In 2020/2021, 729 students were enrolled online, increasing to 759 face-to-face in 2021/2022. Research undertaken during lockdown and on return to face-to-face provision confirms that when TBL is coupled with a business simulation, it proves to be an effective pedagogy supporting diversity, engaging learners, developing employability skills, and increasing student networking in ways alternative pedagogies could not achieve.

Keywords: *Team-based learning; business simulations; inclusivity; diversity; employability skills.*

1. Introduction

Increasing module numbers from 488 in 2017 to 729 in 2020 and 759 in 2021 have caused a dilemma around engagement, inclusivity, feedback, and a good student experience. There is a real risk students can participate in little or no activity, let alone engage in critical thinking. Covid-19 has compounded the problem further. Online provision has varied depending upon the school or college attended, resulting in a negative impact on learners' education and general well-being (Stringer & Keys, 2021). These points have been at the forefront of my mind in deciding how to engage learners and have led to the module being re-designed using constructivist pedagogy - Team Based Learning (TBL) followed by a business simulation. The following reflects the success of this approach.

2. Description of the Teaching/Learning Context

N1065 Introduction to Business & Management is a first year, semester one core module. In September 2020, 729 students were enrolled in 13 workshops, each with approximately 55 students who were taught by six lecturers – five taught previously on N1065, one was new to the University. In 2021/22, 759 students were enrolled in 15 workshops, each with approximately 55 students and seven lecturers - five taught previously on N1065; two had not. Two thirds of the cohort were home students - the remaining third, international/EU. Module structure comprised a one-hour asynchronous prerecorded weekly lecture and a synchronous two-hour workshop. The lecture introduced concepts, gave instructions, and included guest speakers. Workshops in weeks 1-6 used TBL; followed by the online business simulation in Weeks 7-11.

3. Literature Review

Internationalisation of HE has generated significant challenges e.g. large classes experienced by first year undergraduates and an increasingly diverse student body. These issues alone create complications in designing modules to encourage participation, engagement, and promote a good learning experience. Add a pandemic into the mix, and a whole new level of complexity emerges for module convenors.

Historically first year undergraduates struggle with the 'impersonal nature' and 'culture of anonymity' of large classes resulting in 'low engagement' and 'high absenteeism', (Mulryan-Kyne, 2010; De Matos-Ala & Hornsby, 2013, p.81). Questions circulated around how to develop modules that engage students and achieve deep level learning, whilst minimising anonymity and addressing the high levels of isolation and loneliness being reported (Office for National Statistics, 2021). Concerns regarding available resources for

both students and staff, time zone differences, and worries about the increasing staff workload were never far away.

Large classes are ideal to try innovative constructivist strategies. Constructivist pedagogy proposes that 'knowledge is generated by a complex interaction between the learner and the environment' where they learn through experience, adding new knowledge to existing knowledge to form new or better understandings (Brenner, 2013, p.64). Vygotsky extends the concept further to discuss social constructivist pedagogy in that 'learning occurs when students solve problems beyond their current developmental level with the support of their teachers or peers' (Brenner, 2013, p64), highlighting the 'relationship between cognitive processes and social interaction' (Brame, 2016 p.2). Enter TBL and the business simulation.

TBL is a 'practical and effective' way to meet the challenges highlighted above whilst improving team and individual performance/outcomes (Michaelsen, et al., 2014, p.58; Ficapal-Cusia & Boada-Graub, 2015). TBL was developed by Larry Michaelsen in 1979 to increase engagement in large management classes. TBL 'is a flipped classroom teaching and learning method, using carefully constructed materials and facilitation strategies to foster knowledge acquisition, competency in applying that knowledge, critical thinking, and team building' (Winter, 2020, p1). It is an iterative learning process based on Piaget, Kolb and Dewey's experiential learning models using active learning processes (Miettinen, 2010; Brame, 2019).

TBL fits within the social constructivist practitioner's toolbox as it has two main attributes. 1. Lecturer's role shifts from information giver to facilitator, placing the onus on students to 'actively engage' in problem solving activities; 2. TBL develops 'small self-managing learning teams', regardless of the overall class size, leading to engaged and motivated learners, capable of solving complex problems and achieving deep learning (Michaelsen, et al, 2014, p 58). TBL can 'provide greater equity ... promote inclusivity and provide structured opportunities to build intercultural communication and dialogue' essential for international students at any time, never more so in lockdown (Hussain, 2021, p.76).

With the online business simulation, pedagogy shifts to problem-based learning. Comparable to TBL, but with one subtle difference: whilst both are facilitation roles, under PBL the lecturer is 'actively involved' and will step in to support teams to complete the simulation (Michaelsen, et al, 2014 p70). The lecturer's role shifts from teacher/facilitator to Business Coach, reversing class hierarchy. Business simulations fit within constructivist pedagogy; they are an experiential learning pedagogy giving students a 'transformational real world' learning experience (Cadotte, 2016, p.119). This paper refers to an enterprise simulation where teams of students start and run a business playing against the computer (Anderson & Lawton, 2009, p.194).

Business simulations have historically been criticised for not enabling students to develop Bloom's higher order skills, achieving only lower order learning (Anderson & Lawton, 2009). Conversely, recent research suggests the opposite is in fact true. Using Anderson and Krathwohl's revised version of Bloom's Taxonomy, teams clearly reach 'evaluate' – a higher order skill within Bloom's Taxonomy (Wilson, 2016), as highlighted by Cadotte & MacGuire (2013, p38)

simulations provide students with opportunities to manage a complex organisation over an extended period of time in the face of great uncertainty students apply their knowledge by thinking and acting in an integrative manner as they adapt to changing business conditions,' to this end, students 'construct their own understanding, raise questions, generate, and explore their own modules and build representations that organise their experiences.

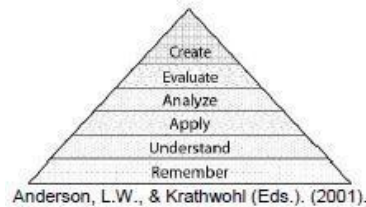


Figure 1: Anderson & Krathwohl's Revised Taxonomy

TBL is a useful tool to run before business simulations as permanent teams need time to develop into high performing teams, as highlighted by Tuckman, prior to completing the business simulation (Taylor, 2017).

4. Empirical Methodology/Data

Quantitative methods were used to collect data via end of module surveys circulated to 2020/21 and 2021/22 cohorts. In 2020/21, 188 students responded, 180 in 2021/22. Surveys were anonymous.

The 2020/2021 survey revealed that while 61% of students were anxious about joining University of Sussex Business School in lockdown, 61% of students were anxious they had lost educational skills, in fact 88% of students reported TBL developed deep learning quickly, 73% developed effective networks and friends, 73% reported TBL developed trust amongst team members and 81% revealed TBL was beneficial in forming cohesive teams for the business simulation. 85% of students reported they would like to see TBL used in other modules and 89% stated they would recommend TBL to other students.

The 2021/2022 survey revealed a similar picture in that 98% students found TBL was a very effective way of learning and engaging with the module whilst 76% students stated TBL improved their time management skills. Interestingly 88% stated TBL was very effective in developing the group with 86% stated TBL was effective in developing friends and networking and 93% stated TBL developed trust with team members; 87% of students would recommend TBL to others.

5. Analysis of/Reflection on/Implications for Practice

TBL and the business simulation have led to good results, feedback, and learner progression. Engagement and participation, clearly observable both online and face-to-face, increased. Marks held steady - the overall module mean in 2020/2021 was 63.57 compared to 2021/2022 at 63.62, despite concerns regarding achievement in an online setting at the start of September 2020. Assessments were moderated by a second Business Coach to ensure consistency and a sample double marked by USBS's External Examiner.

Module feedback was consistent across workshops justifying TBL and the business simulation. Student comments include the pedagogy '*reduced isolation and anxiety*', '*fostered learning*', '*developed soft skills*', encouraged home and international students to '*collaborate*' and even '*have fun*'. Staff workload was considered manageable with staff preferring the end of module team presentations to individual exams. The mid-term MCQ taken in Week 6 was marked automatically by the VLE, requiring no additional workload hours. As module convenor, my workload was intense, having to field daily questions from students, staff, administrative queries and organising guest speakers.

During 2020/2021, attendance was excellent with near full attendance in all online workshops; in 2021/2022 attendance was good but not quite as good the previous year.

TBL works well online and face-to-face in large group settings. It is effective in engaging students and developing valuable employment skills. Combined with the business simulation it is a powerful pedagogy

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