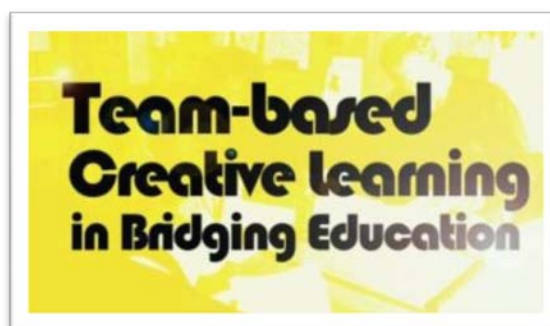# Team-based, creative learning in bridging education

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Introduction

Frustrated by high student attrition and failure rates – both course-specific and overall within Victoria University of Wellington's (VUW) Level 4 University Preparation programme – I developed and introduced team-based, creative learning exercises and assessments into the social science elective (UP016) in an attempt to overcome this situation. The introduction of team-based, creative learning (TBCL) resulted in improved student retention and course pass rates for UP016 and has had positive socio-educational outcomes for both students and teachers. This article and the accompanying video, produced with the assistance of an AKO Good Practice Publication Grant (GPPG10-004), examines the rationales behind the introduction of TBCL; the operational mechanics (e.g. group formation); problems encountered and consequent refinements made; possible improvements for future applications of TBCL; and the impact of TBCL on student retention and success in UP016 over four trimesters during 2009–2010.

Rationales for the introduction of team-based, creative learning

In Trimester 1, 2009 I created and introduced team-based, creative learning (TBCL) exercises into the Level 4, Social Science paper (UP016) taught within the University Preparation programme at Victoria University of Wellington. I pursued this initiative in an attempt to reverse what I considered unacceptably high rates of attrition (approximately 30–40%) and course failure (approximately 50–55%) over the

previous years I had taught this course. In many cases higher levels of attrition and course failure were reflected throughout the University Preparation programme, which fulltime students engaged via two compulsory courses – Academic Writing and Skills for University Study and two of the optional courses – Commerce, Humanities, Mathematics & Statistics, Science or Social Sciences. The programme runs for 12 weeks or 480 hours, and consists of 240 hours of contact study and 240 hours of self-directed study.

UP016 focused on introductory anthropology and sociology and was designed to assist students to transition successfully into Level 5, degree-based university study in these and cognate social science disciplines (e.g. geography). My tutors and I put enormous amounts of energy and enthusiasm into teaching UP016, which was reflected in that UP016 had evolved into the most popular optional course offered by University Preparation and constantly attracted exemplary student evaluations, both formal and anecdotal. Students responded particularly positively to a teaching strategy designed to consistently link the conceptual and theoretical components of UP016 to often routine and seemingly mundane aspects of their everyday lives. This strategy not only acknowledged and utilised students' existing socio-cultural competencies, but also provided a foundation from which students could understand and develop proficiency in the critical analytical skills that typically underpin the social sciences within academia. Despite these initiatives UP016 was nevertheless marred by high attrition and failure rates – thus when I adopted and developed a team-based, creative learning approach it was with an increasing sense of desperation.

I first learnt of team-based learning from a UP colleague who had attended a seminar run by Professor L. Dee Fink, one of founding doyens of team-based learning, at the 2008 New Zealand Association of Bridging Educators Conference held in Rotorua. I was initially sceptical about the merit of team-based learning and especially whether this was an appropriate regime to encourage and assess individual learning within a university environment. I believe my scepticism was based primarily on my own individualistic experience of university as a student, tutor and lecturer. However, research on team-based learning has concluded that student engagement with, and comprehension of, curriculum is appreciably improved by team-based learning and that a number of capabilities, including independent learning, interpersonal or social skills, collaborative learning and cohort cohesiveness, are likewise enhanced. Research also suggested that team-based learning is particularly effective for small-groups working independently in class time and within high student-faculty ratios (e.g. up to 200:1) – a situation historically encountered in UP016 in the first trimester on any given year (Birmingham & McCord, 2002; Lyons 2007; Michaelsen, Fink, & Knight, 2002). Furthermore, team-based learning has been successfully deployed in the complex and high-workload environments of law and medical studies (Dana, 2007).

Indeed I was already aware that an innate socio-educational dynamic functioned among many UP016 students, typically based on pre-existing social groupings such as flatmates, ethnic groups or cohorts and/or pre-established friendships from secondary school. Moreover, I knew from experience that this socio-educational dynamic could be either positive or negative, depending on the educational proclivities and aspirations of the 'leaders' within such groupings. For example, we had experienced a situation whereby five members of a flat, most of whom were successfully engaging University Preparation

studies, left the programme midway when two of the most influential flatmates exited due to a combination of financial and legal difficulties.

I was also aware that University Preparation students – like most direct-entry Level 5 university students – do not receive any dedicated anthropology or sociology education in New Zealand secondary schools. I decided therefore that the UP016 team-based learning assignments would emulate the already established and successful ethos of situating anthropological and sociological theory/ analysis in the students' everyday lives. However, in addition to drawing on the student's extant socio-cultural competencies I decided that the team-based learning assignments would be creative (Jackson, 2003; La Porte, 2008), to encourage students to gain an understanding of fundamental anthropological and sociological concepts such as culture, ritual and symbolism, etc., through engaging these notions in imaginative and playful ways. This strategy was purposefully deployed to enhance the confidence of students as they encountered unfamiliar 'ways of thinking' – a dynamic that we had utilized previously by enabling UP016 students to sit a comparatively easy 'first test' that the majority passed; and as a consequence many gained an immediate and obvious increase in their confidence and educational aspirations. For example, one TBCL assignment asked students to create an 'alien culture' and to outline holistically its social organisation, socialisation, economic and other processes (see below). In other words, students were encouraged to 'play' with core anthropological and sociological concepts and through the embedded creativity of the TBCL assignments demonstrate their comprehension of anthropological/ sociological concepts without the pressure of providing associated ethnographic or historical facts to substantiate their understandings.

In addition I decided that the TBCL assignments would be linked directly to weekly course readings that, together with lectures, already formed the basis of tutorial discussions and the content of UP016's tests. I hoped that as students were effectively being offered 'several bites of the cherry' with respect to course readings they would be encouraged to complete their required course readings in a timely fashion to ensure their successful participation in tutorials, in TBCL assignments, and in sitting the UP016 tests. In addition to written or other 'material' responses, each TBCL assignment would require a presentation aspect so that students would gain experience in presenting their work within tutorials bolstered by support of other group members.

Finally, I had also noted that student attrition spiked immediately following mid-trimester study breaks, so I scheduled one TBCL exercise to be due the week students returned from study break. I then ensured that tutors emphasised to students that they were expected to meet during the study break to work on and complete this TBCL exercise so that it could be presented in the week of their return to university. It was hoped that deliberately maintaining the social dynamic of the TBCL teams through the mid-trimester break would serve to support and encourage students who were wavering in their commitment to complete University Preparation at a time when they could be especially isolated from each other.

Group Formation

During the first week of UP016 tutorials students were assigned to a Tutorial Assignment Group (TAG), with 4–6 individuals per group. Tutorials typically consist of 15–18 students, thus each TBCL tutorial had three TAGs. Once assigned to their group, the students were given an opportunity to 'totemically' name their groups to help foster social cohesion and commitment to their TAG.

TAG membership was determined by the tutor using the criteria outlined below to transcend pre-existing social groupings, promote broader and positive socio-educational dynamics, and ensure a diversity of social and cultural perspectives (e.g. age, ethnicity, cultural/ educational capital, etc.) so that students could learn of, draw on and/or counter-balance the various strengths and weakness of their peers. Students were required to remain and work within their TAG throughout the trimester unless exceptional circumstances (e.g. student withdrawal from University Preparation) were identified by the tutor, who would respond by generating new groups.

Students were assigned to a TAG using the criterion that applied to them in the first instance. Effectively this resulted in one student for each criterion; they were then assigned to the three TAGs. The criteria deployed were:

> (a) three eldest students
> (b) three youngest students
> (c) three students whose 'home' or residence before beginning university study is the furthest away
> (d) who speak more than one language
> (e) who speak only one language
> (f) first in their family to attend university
> (g) have parents, siblings and/or cousins who have already been to university
> (h) who plan to major in anthropology and/or sociology
> (i) who plan to major in other subjects.

In the first tutorial the TAGs also appointed different students to act as 'Facilitator' and 'Minute Keeper' for each of the TBCL assignments, ensuring that every student would act in these roles in at least once. Facilitators and Minute Keepers were responsible for overseeing their TAG's responses to the various TBCL assignments and ideally worked closely to ensure their TAG completed assignments in a timely and successful fashion. The Facilitator was responsible for organising group discussions and task allocation, and for ensuring TBCL assignments were completed and presented on time; the Minute Keeper recorded the assigned tasks and achievements of individual TAG members. This record was submitted to the tutor for information as all students shared equally the marks awarded to their TAG and accordingly evaluation and grading of individual contributions to the TAGs were not a component of the assessment of the TBCL assignments. However, the TBCL assignments were structured in such a way that individual students were expected to critically engage at least one concept from the assigned TBCL readings and to contribute (i.e. assignment development/ research, production and presentation) to their TAG on this basis.

An additional benefit was that the TAGs were also readily able to be deployed in 'mainstream' UP016 tutorials (i.e. those which directly discuss material from course readings and lectures) and moreover within these tutorials constructively facilitated energetic student-student and student-tutor discussions. Furthermore, students were encouraged to and in many cases independently used their TAGs as 'study groups' outside UP016 tutorials. In many cases they used them to brainstorm ideas, research and edit their individual essays, and revise for class tests. It became evident from the TBCL student focus groups and via informal feedback that students also used their TAGs for collective discussions and considerations of other University Preparation courses and they also provided the basis of supportive social networks within the university environment.

TAG assignments: concepts and creativity

The TAGs were required to work on, and ultimately present, their TBCL assignments within one-hour weekly tutorials especially dedicated to this purpose. UP016 students were also required to attend two-hour weekly 'mainstream' tutorials to discuss readings, lectures and other assignments such as essays and tests. There was a stated expectation that TAGs would also meet outside dedicated tutorial times on an 'as needs' basis, especially during the two-week, mid-trimester study break to work on their second TBCL assignment, which was due in the week the students returned to class.

The TBCL assignments were designed to ensure students engaged directly with the core social science concepts that form the basis of course readings and lectures, although this was done in a manner that was creative and fun (Jackson, 2002, 2003; La Porte, 2008). Students were encouraged to effectively 'play' with core anthropological and sociological concepts, which, until their participation in UP016, may have been quite unfamiliar to them. This was done by applying these within considerations that arose from their own creativity and accordingly for which there was no 'right' or 'wrong' application. Through such TBCL play it was hoped students would gain confidence in intellectually approaching and comprehending these concepts and associated critical/ analytical ways of thinking. The TAG responses to the TBCL assignments were assessed first on their meaningful comprehension of the social science concepts under examination and second on the creative manner in which they deployed these concepts.

Students were required to complete three or four TBCL assignments, which were spread evenly throughout the trimester of study and thus canvassed a wide range of the course material. The following is an example of a TBCL assignment deployed in UP016 and was the first TBCL assignment students were required to complete.

Assignment One: An alien toilet culture:

Course Readings:

- Kottak, C. 1991 Culture. In *Anthropology: The Exploration of Human Destiny.*

- Howland, P. 2004 Life's a dunny... Anthropologically speaking.

- Miner, H. 1956 Body Ritual Among the Nacirema.

Your TAG will:

1. Appoint a Facilitator who is responsible for keeping the group on track and ensuring the assignment is completed/ presented on time, and a Minute Keeper who is responsible for recording the individual team members' contributions. This record is to be handed-in with the completed assignment; and

2. Imagine you are anthropologists conducting 'inter-galactic' fieldwork on an imaginary alien culture/ society in galaxy far, far away. Write a brief (500–800 words) anthropological-style, ethnographic analysis that:
   (a) Names the alien culture/ society;
   (b) Uses specific concepts/ideas – including the appropriate terminology (highlight in bold) – from the assigned course readings to discuss and analyse the aliens' physical, social, and cultural existence. In this respect you need to think about the holistic connections between age structure; gender(s) – if any or many; cultural learning or enculturation, ideals, social norms etc; production of food sources; 'sexual' reproduction; social organisation (e.g. community structures; social hierarchies etc) and so on;
   (c) Also discusses the alien's culture of toileting or bodily waste disposal – identifying how this is also holistically related to aspects of their physical, social and cultural existence previously discussed.

NOTE: Each group member is to provide one concept and to link this to the overall discussion/analysis of alien culture.

The reading – "Life's a dunny... Anthropologically speaking" (as does Horace Miner's 'Nacirema' in the ritual readings) – provides examples of this type of analysis/discussion. Remember to avoid negative ethnocentric judgements and evaluations (although clearly what you find interesting will reflect your own 'toilet culture', norms, beliefs, etc.). Your analysis/discussion should therefore be culturally relative and attempt to explain the aliens' 'toilet culture' in terms of their own cultural/ social logics. You are encouraged to illustrate your analysis with appropriate images. As you will read your analysis to your tutorial, have some fun producing it!

Students shared the mark their TAG received for the TBCL assignments; however, the final TBCL mark assigned to them individually was allocated on a pro rata basis that was linked to the number of TAG tutorials they attended. This was done in attempt to ensure individual accountability, meaningfully recognise and reward individual contributions, and dissuade 'free-loading' by individual students (Bastick, 1999; Michaelsen & Knight, 2002), and was calculated in the following manner:

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TAG attendance/mark retention	
Attendance	% mark retained
8-9 tutorials	100%
6-7 tutorials	75%
4-5 tutorials	50%
2-3 tutorials	25%
0-1 tutorials	0%

Moreover, students were required to sit 'Individual Tutorial Tests' (ITT), which assessed their individual knowledge of the material in the course readings also used as the basis of the TBLC assignments. It was assumed that students who had individually developed a significant understanding of the course material would be able to make an equally significant contribution to their TAG and vice-versa. While this assumption generally appears to hold true, anecdotal evidence suggests that in some instances quite capable students who perform well in ITT do not necessarily enthusiastically participate in TAG discussions or TBCL assignment exercises. Nevertheless, the relative weighting of marks allocated to TBCL assignments (6% each or 18% total of the final UP016 mark) and the ITT (9% each or 27% total of the final UP016 mark) was such that capable students could potentially refrain from participation in their TAG and still easily pass UP016 with a 50% final mark mined from the remaining 82% of non-TBCL marks (i.e. essay and tests) on offer. This situation will, however, alter to some extent in Trimester One, 2011, when Victoria University imposes changes to the degree-study entry criteria for University Preparation, meaning that these students will require a B or 65% average across their four University Preparation courses to gain entry into degree-based study. Modelling is being currently undertaken to ascertain the impact this change will have on students beginning TBCL assessments in UP016, although it is most likely it will be additional compulsion to pursue energetically any TBCL marks on offer.

Problems, refinements and potentials

Student feedback on the TBCL exercises – collected via an evaluation survey conducted after the introduction of TBCL exercises in Trimester 1, 2009, focus group discussions, and informal student/ tutor discussions – has been mostly positive and especially so in respect to social learning dynamics, constructive peer support, creative 'play' and consequential learning of anthropological/ sociological concepts, development of critical/ analytical thinking capabilities, and presentation experience facilitated by the TBCL assignments. Indeed 79.1% of surveyed students (n = 69) rated the effectiveness of the

TBCL exercises as Very Good to Excellent and only 9% as either Partly Effective or Not Effective. On a sliding differential scale (1 = Excellent to 5 = Ineffective) the students rated the effectiveness of the TBCL exercises at 1.9 (See Table 1).

The major concerns expressed by students, however, were that TBCL exercises require dedicated tutorial time and tutor support to enable successful completion, and that some students 'freeload' or 'wave ride' on the efforts of their team mates yet still receive the same collective 'team mark'. However, it should be noted that students in the focus-group discussions stated that while 'freeloading' was an initial concern for them, such incidences had prompted them to adopt a 'leadership' role and to pursue more 'pragmatic' and 'strategic' approaches to ensure their TAG's assignment work was completed and presented successfully, and that as many students as possible participated in TAG work – which included developing an understanding of and allowance for different learning and contribution styles. This led to the realisation that irrespective of the contributions of other students, they as individuals still benefited from the TBCL exercises. In this regard these students believed they had positively 'matured' in both their approach to assignments/ assessments and their social engagements with other students both in the TAG dynamics and in the university's socio-educational environment.

Another possible solution to student concerns about freeloading could be to incorporate a peer-evaluation component into the overall assessment. In this way students could evaluate and grade each others' contributions to their team-based, creative exercises. This would not only reward constructive effort and penalise freeloaders, but would also pre-emptively create an ethos in which students are aware that their individual contributions are explicitly required and accordingly will be subjected to the monitoring and assessment of their team mates. It would also provide an additional mechanism by which individual contributions will directly affect individual grades within the team-based, creative assignments.

However, in response to the students' concerns I first negotiated additional tutorial time and tutor coverage dedicated to TBCL exercises – indeed, I was also concerned that TBCL work was negatively 'cutting in' on other necessary UP016 tutorial learning. Second, I introduced the pro rata individual TBCL mark regime that is based on individual attendance at the dedicated TBCL tutorials. I also ensured that greater specificity in expectations of individual contributions to TBCL assignments was outlined in the assignment instructions – though this is a formative expectation and is not assessed. I believe these refinements, in conjunction with the ITTs that focus on the same course readings on which TBCL exercises are based, ensure individual contributions to TBCL exercises are clearly outlined and assessed – evidenced by course pass rates either including or excluding TBCL marks beginning to mirror each other from Trimester 3, 2009 onwards.

The only other concern I have, and which has also been independently confirmed by my tutors, is that students tend to get excited by the creative aspects of the TBCL exercises and consequently devote less energy and time to competently linking their creative responses to the anthropological/ sociological concepts covered in the course readings and as required by the TBCL assignments. I have sought to address this issue by clearly outlining this expectation in the instructions and assessment guidelines for TBCL assignments and by tutors repeatedly emphasising this expectation in TBCL tutorials and

assessments.

Table 1: Student Evaluation of TBCL Exercises (n = 69)*

Survey Question	Student rating
Important information about Group Tutorial Assignments - such as learning objectives, deadlines, assessments and grading criteria - was communicated clearly.	1.7
Preparing for the Group Tutorial Assignments has helped me to learn	2.2
The creative or imaginary aspects of the Group Tutorial Assignments helped me understand relevant anthropological/sociological concepts	1.9
Comments and feedback I received during the Group Tutorial Assignments have helped me learn more effectively	2.2
The Group Tutorial Assignments have helped me to develop my COMMUNICATION SKILLS	2.2
Group Tutorial Assignments have helped me to develop my SOCIAL/GROUP SKILLS	2.2
Participating in Group Tutorial Assignments encouraged me to think CRITICALLY	2.2
The links between the Group Tutorial Assignments and associated themes/concepts covered in the course readings were adequately explained	1.6
The Group Tutorial Assignments assisted my learning of concepts/themes covered in the course	1.9
The marks assigned to the Group Tutorial assignments were fair to me as an individual student	1.7
Group Tutorial Assignments stimulated my interest in learning more about this subject	2.0

(Note: 1 = Always; 2 = Usually; 3= Sometimes; 4 = Rarely; 5 = Never; 0 = No Opinion)

TBCL success

The introduction of TBCL exercises and assignments into UP016 has significantly improved student retention and course pass rates. Course pass rates have improved most dramatically in Trimester 1 when UP016 classes have been historically around 100 students (compared with approximately 50 for Trimester 2 and approximately 25 for Trimester 3), although the level of improvement was most significant in Trimester 1, 2010, when enrolments were only 66 students. There is also evidence of positive flow-on effects as measured by pass rates in the final exam, although these results are variable possibly due to staffing issues and an increase in the difficulty/sophistication of this exam since Trimester 3, 2009. Once again, however, the improvement is most marked for Trimester 1, 2010.

(i) Student Retention:

Student retention has been measured by the number of students who complete the UP016 course and specifically by those who sit the final exam. The average number of students who completed UP016 in the six trimesters from 2007 to 2008 inclusive was 72.3%. Since the introduction of the TBCL exercises in 2009 the student retention rate over the four trimesters from 2009 to Trimester 1, 2010 has increased to 84.1% – an overall increase of +11.8% (see Table 2).

Table 2: Student Retention, 2007–2010

	Trimesters	Enrolled	Retained	Attrition
2007–2008 (Non-TBCL)	6	387	280 (72.3%)	107 (27.7%)
2009–2010 (TBCL)	4	271	228 (84.1%)	43 (15.9%)
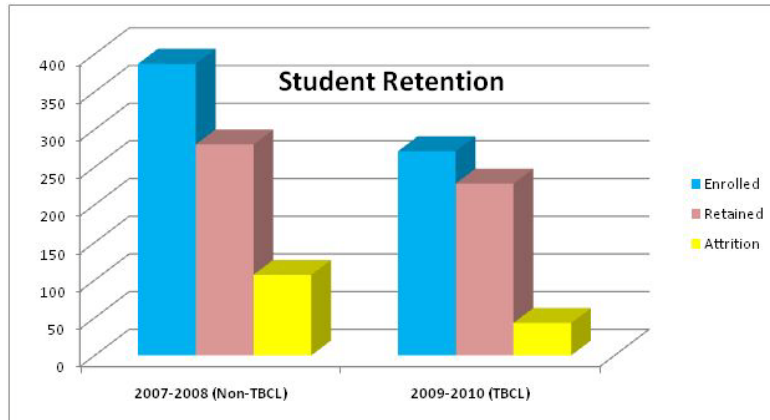
Student Retention

Increased student retention has been similar on a trimester basis since the introduction of TBCL exercise in Trimester 1, 2009 – ranging from +15.3% in Trimester 1, 2009 and 2010 combined through to +17.9% for Trimester 2, 2009 and +16.6% for Trimester 3, 2009. This increase in retention rates indicates the effectiveness of TBCL in encouraging student retention is constant, despite variations in the number of students enrolled.

(ii) Course Pass Rates:

Overall student success has markedly improved, with course pass rates increasing by +23.1% for the four TBCL trimesters (2009–2010) when compared with the combined course pass rate for the six non-TBCL trimesters (2007–2008). Even when the potential inflationary influence of the TBCL marks are factored out, the overall improvement in course pass rates is +16.5% (see Table 3). The possible inflationary influence of the TBCL exercises is something of which I have been mindful and have monitored from the onset. It is notable that as the TBCL operational processes and assessment regimes have been refined, partially due to this monitoring but also in response to student/tutor suggestions and concerns, the inflationary effect of TBCL marks has been nullified especially in the most recent trimesters analysed (i.e. T3, 2009 and T1, 2010).

Although the overall student success has improved, there is significant variation in course pass rates by trimester. Trimester 1, 2009 and 2010 combined recorded the greatest comparative increase in student success, with course pass rates improving +31.4% (including TBCL marks) and +23.8% (excluding TBCL marks) compared with the combined course pass rates for Trimester 1, 2007 and 2008. Trimester 2, 2009, recorded improvements of +7.5% (including TBCL marks) and +1.2% (excluding TBCL marks) compared with the combined course pass rates for Trimester 2, 2007 and 2008, with Trimester 3, 2009, recording improvements of +8% (including and excluding TBCL marks) compared with the combined course pass rates for Trimester 3, 2007 and 2008. The lower improvements in student success recorded for Trimester 2 and Trimester 3, 2009, when TBCL exercises were operational, could be due to the small sample size, although it may also indicate that TBCL is most effective in improving student pass rates in larger size classes – a finding supported by other research into team-based learning (Michaelsen, Fink, & Knight 1997).

Table 3: Total Course Pass Rates:

	Students Enrolled			
	Trimesters	Enrolled	Passed	Failed
2007-2008	6	387	199 (51/4%)	188 (48.6%)
2009-2010 (incl. TBCL marks)	4	271	202 (74.5%)	69 (25.5%)
2009-2010 (excl. TBCL marks)	4	271	184 (67/9%)	87 (31.1%)
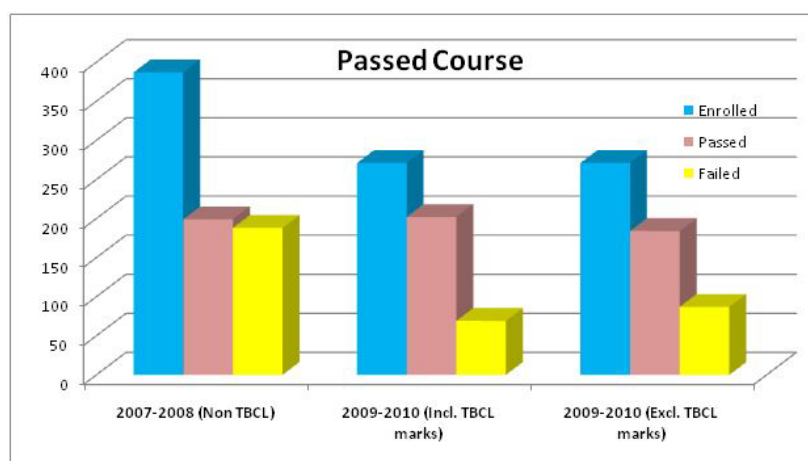
(iii) Flow-on Effects in UP016:

Evidence that the TBCL exercises have had a positive flow-on effect for students attempting other UP016 assignments was assessed by evaluating the pass rates in the final exam. The final exam assesses students' understanding of the range of material taught throughout a trimester and accordingly it was hoped that the TBCL exercises would positively contribute to the students' final exam performance.

Evidence of positive flow-on effects is not, however, as pronounced with an overall increase of +4.3% in final exam pass rates over four TBCL trimesters (2009–2010) compared with pass rates in the preceding six non-TBCL trimesters (2007–2008). The improvement was most marked in Trimester 1 (see Table 4) when class sizes are historically significantly larger than in other trimesters. In Trimesters
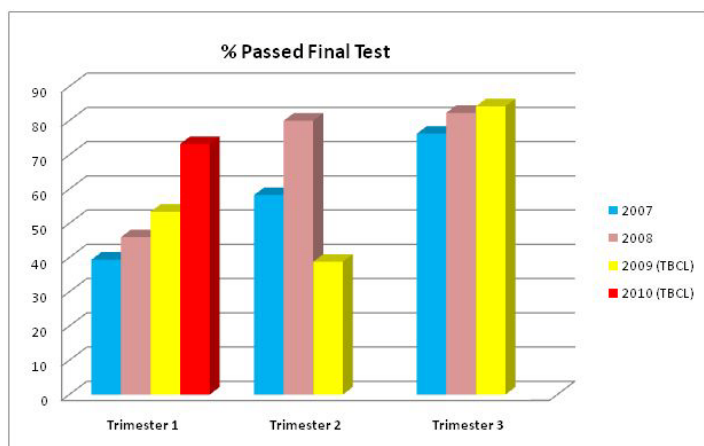
1, 2009 and 2010, a total of 53.4% and 73.2% students passed respectively, compared with a total of 39.4% for Trimester 1 2007 and 46% for Trimester 1 2008 (see below).

In Trimester 2, 2009, however, only 38.8% of students passed the final exam compared with 58.3% for Trimester 2 in 2007 and 80% for Trimester 2 in 2008 (see Table 4). This decrease appears anomalous when compared with other results and may be explained by a change in personnel coordinating/lecturing for the last eight weeks of this trimester, which included designing, administering, and assessing the final exam. It may also be explained by the particular cohort of students in this trimester or simply by the small sample size (i.e. one trimester) used for comparative purposes. The least improvement was recorded (+5.3%) in Trimester 3, 2009, with a total 84.2% of students passing, compared with a total 78.9% for Trimester 3 2007 and 2008 combined (see Table 4). Moreover, students appear to perform better in the final exam in Trimesters 2 and 3 when class sizes are historically smaller.

Despite the variance in these results, the marked improvement in students passing the final exam in Trimester 1, 2010 was especially pleasing (73.2% compared with 53.4% in the TBCL Trimester 1, 2009; 39.4% and 46% for the non-TBCL Trimesters 1, 2007 and 2008, respectively; see below) – although this improvement was likely due to both the cumulative refinements in the TBCL exercises (operational and assessment) and the University Preparation programme restricting entry to more capable students from 2007 onwards.

Table 4: Flow-on Effects/ Final Exam in Trimester 1

Final Test – Student Pass Rates

Year	Tri. 1	Tri. 2	Tri. 3
2007	39.4%	58.3%	76.2%
2008	46.0%	80.0%	82.3%
2009 (TBCL)	53.4%	38.8%	84.2%
2010 (TBCL)	73.2%	n/a	n/a

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% Passed Final Test

Conclusion

The introduction and consequent refinements of TBCL exercises in UP016 over four consecutive trimesters from Trimester 1, 2009, to Trimester 1, 2010, have had positive learner benefits as evidenced by marked improvements in student retention and course pass rates (even when the potential inflationary effects of TBCL marks are excluded from this consideration). The improvement in student retention has been constant over this period, although the improvement in course pass rates has been most significant in the Trimester 1 classes, which have historically been the largest that UP016 administers. Evidence of learner benefits in terms of positive flow-on effects is mixed, although a small overall improvement has been recorded in the final exam. Most recently, in Trimester 1, 2010, however, a dramatic improvement in final exam pass rates was recorded. Nevertheless additional monitoring and review is required to ensure that potential learning/educational benefits flow-on to other aspects of UP016 learning and assessment, in particular into improving pass rates in the final exam. Students have for the most part responded positively to the TBCL initiative and have benefitted from both the social and socio-educational networks they developed as a consequence. Potential improvements to the TBCL exercises could include the introduction of a peer-evaluation component that could alleviate student concerns about, and the 'reality' of, freeloaders.

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