

A blend of blended and team based learning

Teaching and Learning Forum
2015

Category: Refereed research

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Blended learning and team based learning are strategies that support student centred learning and active learning. This paper presents outcomes of changing a third year criminology unit to these strategies. Data was collected as part of standard quality control in Week 5 of Semester 2 2014, from students who attended class on that day. Twenty three students responded to the survey which included both quantitative and qualitative responses. Seven attending students failed to respond. The data indicated that although students were positive about the unit content in the quantitative data, the qualitative data indicated that they did not like the blended approach nor the team based learning approach to delivery. The paper concludes with some lessons learned and recommendations for the future.

The nature of university teaching has been changing over the last 20 years with a movement towards student-centred learning and/or active learning environments in which the lecturer changes from the role of teacher in the Instructional Paradigm to the role of facilitator of learning in the Learning Paradigm (Barr & Tagg, 1995). One of the earlier seminal works on active learning (Chickering & Gamson, 1987, p. 1) reported seven principles for tertiary good teaching practice:

1. Encourages contacts between students and faculty.
2. Develops reciprocity and cooperation among students.
3. Uses active learning techniques.
4. Gives prompt feedback.
5. Emphasises time on task.
6. Communicates high expectations.
7. Respects diverse talents and ways of learning.

Depth of learning has been noted as a concern and moves to enhance student engagement with the content of their learning has been identified as an issue that also needs to be addressed. Student-centred learning should facilitate such engagement through activities provided to assist the students develop the knowledge and skills required for successful completion of their study. Using a number of probing techniques can improve depth of learning (White & Gunstone, 1992). These techniques such as the development of concept maps, or prediction-observation-explanation, and interviews with experts are dependent upon the nature of the learning and its context. The move to active student learning has resulted in improved grades for students across a range of disciplines like science, (Hadzibegovic, & Slisko, 2013; Michael, 2006) and mathematics, (Mullen, 2012) and acceptable levels of satisfaction with the class structure (Hadzibegovic, & Slisko, 2013) even when no formal lecture was provided (Mullen, 2012). Michael (2006) refers to the “multiplicity of sources of evidence” (p. 165) for the success of active learning.

Blended learning

In recent times the introduction of a range of technologies has extended the impact of active learning providing opportunities for the simulation of real life activities and supporting student interaction (Coldwell, Craig & Goold, 2011) and has led to opportunities for blended learning. Additionally technology is extending further towards providing opportunities for blended synchronous learning which allows remote students to interact with on campus lectures in real time (Bower, et al. 2014). Currently many opportunities for blended learning are asynchronous.

There are a range of definitions of blended learning, however in this paper the definition provided by Bliuc, Goodyear, and Ellis (2007) has been adopted:

Blended learning' describes learning activities that involve a systematic combination of co-present (face-to-face) interactions and technologically-mediated interactions between students, teachers and learning resources. (p. 234).

Blended learning which supports active learning is becoming more fashionable in university teaching and may act as an equaliser between the learning experiences for on campus students and those who choose to learn online.

The majority of research published on blended learning has been based on case studies provided by teachers who have undertaken a blended learning approach and this may be a limiting factor in the development of knowledge and practice of blended learning (Bliuc et al). Whilst these case studies provide useful information based on experience, more in depth research investigating the overall effects of the use of blended learning are required (Bliuc et al.). Some of the reasons provided by a range of writers about the introduction and use of blended learning include improving the student experience of learning; the investigation of the most useful component of blended learning through an evaluation of a range of activities (Bliuc et al.); moving students to active learning (Pizzi, 2014); improving student sense of community (Rovai & Jordan, 2004); addressing student feedback, teaching issues, flexibility in time and place of learning, involvement of professional bodies (Sharpe, nd); and widening participation (Sharpe, Benfield, Roberts & Francis, 2006).

More recent research is moving towards more integrated assessment of the effects of blended learning. Wong, Tatnall, and Burgess (2014) reported on the use of blended learning in a university first year accounting module and investigated student readiness for blended learning, the intensity of adoption and the impact of blended learning. A range of approaches to learning were offered from face to face to completely online. Students indicated an overall preference for face to face lectures and tutorials across all three aspects of preference, adoption, and learning effectiveness. The preference for face to face implies that students may not have been ready for blended learning or completely online approaches. Although not measured directly in this research, student readiness for blended learning was identified as an important precursor to implementation. However in a study of postgraduate education courses, students in the blended learning course reported higher levels of sense of community and higher levels of learning than the face to face or on line learning (Rovai & Jordan, 2004). Sharpe, Benfield, Roberts and Francis (2006) reported on blended learning progress within the United Kingdom reporting that student responses were "overwhelmingly positive" (p. 3) to the provision of blended learning and that they valued the flexibility to study from home or on campus. The less enthusiastic results in Wong et al. may be the result of the students being in first year and still transitioning to an adult learning environment.

Pizzi (2014) reported on his process for the establishment of a blended learning course and reported mixed student reflections on their experiences. For some students it was a 'big struggle'; for others it was learning to become better organised and for some it appeared to improve their retention of knowledge and facts. Overall students were more positive as their experience with blended learning increased. Pizzi also suggested that students need to be introduced slowly to the format, supporting the readiness aspect raised by Wong et al. (2014).

Several writers indicate that teacher preparation for blended learning (Pizzi, 2014) and active learning (Mullen 2012) can be more time consuming than that for face to face lectures. For blended learning to be successful, the face to face and on line components need to be coherent (Sharma, 2010). The concept of informing students of the benefits of blended learning is carried through several papers (Sharpe et al., 2006; Wong, Tatnall & Burgess, 2014). Students need to be prepared (informed) for blended learning and teachers need to consider the abilities of the students to manage this form of learning (Oliver & Stallings, 2014).

One of the challenges identified in delivering courses through blended learning is computer failure. Pizzi (2014) suggested that being factual about such failures and having a backup plan is a good strategy.

Team based learning

Team based learning (TBL) has been shown to provide positive learning experiences and increased test performance over a period of at least 30 years (Michaelsen & Sweet, 2011). It comprises four practical elements: strategically formed, permanent teams; readiness assurance; application activities that promote both critical thinking and team development; and peer evaluation. In a systematic review of the research into TBL Sisk (2011) reported that TBL has been successfully used across a number of disciplines including nursing, medicine, education, and business. Success has been measured by student satisfaction and engagement, and higher examination scores.

There are however a number of challenges to the implementation of TBL. Mullen (2012) reported on the challenges for allocating students into teams, with some able and enthusiastic students undertaking the in-class tasks prior to class and then seeking further work for in-class or commencing assessment work. This did not facilitate in-class collaboration which was one of the intended outcomes for the learning. Similarly, Krishnan, Gabb, and Vale (2011) present three specific group cultures that affect the depth of learning and collaborative nature of the learning. In this paper, the authors present the situation of teams of first year engineering students who were asked to work in teams to work on problems. Of the eight teams, three adopted a 'finishing culture' which was based on the completion of individual tasks rather than the team-based expectations. The second set of groups (three groups) used a 'performing culture' with a focus on gaining the highest grades for their members. Teams using the performing approach produced better work than those who were focused on finishing. However, the performing approach did not support the learning of all members. The remaining two teams were described as using a 'collaborative learning culture'. In these groups there appeared to be greater team cohesiveness and collaboration and deep learning was evident. The collaborative teams were considered to be the most successful in supporting the learning of all the team members.

Clearly, team interactions and culture are shaped by the prior experiences of the members. Krishnan, Gabb, and Vale (2011) intimated the importance of taking the time to establish the teams and the monitoring of group processes to avoid teams developing the finishing or performing cultures. Students need to be educated on the importance of collaborative learning and its benefits for all. The differences between teams and groups are well established in the business literature (Fisher, Hunter, & Macrosson, 1997; Utley, Brown, & Benfield, 2009, 2010).

This paper provides an example of adopting a combined blended learning and team based approach to learning. It includes some of the challenges of moving on campus students to both blended learning and team based learning. The introduction of these approaches was based on both student feedback from the previous year which indicated that students wanted a more active learning environment; and the lecturer's own weekly reflections from the previous year which consisted of many comments of "I am doing too much talking". The challenge faced was to maintain content and also provide increased opportunities for active learning. Therefore the decision was made in consultation with the course co-ordinator and the head of school to amend the nature of the delivery. The reasons are similar to those cited in the literature, in particular student feedback and active learning, and the reflections of the lecturer. The same approach was applied on campus and online. This paper reports on the on campus experience.

Unit chosen and reasons for choice

A third year criminology unit *Offender Profiling* was chosen as an ideal avenue for a combination of blended and team based learning. Blended learning was chosen as this facilitated other aspects of the decision regarding a more active learning environment. Team based learning was applied as it was evident that the people working in this domain mostly operated within teams and that these teams were

often multi-skilled from a variety of academic and practical domains. In this way the work in class represented some of the reality of working as a profiler.

Student abilities to cope with both blended and team based learning were assessed as high as the unit in which these changes were implemented was a third year unit, taken in the last semester of the undergraduate degree. By this time students should be self-directed learners and have developed a maturity to work under different circumstances. Additionally, the majority of the cohort had been exposed to group work in previous core units. The difference in the current case was that the team work was designed as a learning mechanism and was not part of the assessment structure for the unit.

Prior planning for the blended and team based learning

As this unit had been delivered for some time a structure of the topics for each week and a range of resources were already available. The main aspect of the blended learning preparation was the recording of the weekly lecture material, preparation of the Readiness Assurance Tests (which were a new resource), and ensuring that students had clear instructions as to what was required of them during the week. An example of these instructions is shown below. The materials had to be included on Blackboard in good time to allow pre-class preparation and were generally available by Monday morning with the class scheduled for Wednesday late afternoon. The ‘instructions for this week’ supplemented the information provided at the beginning of semester in a unit plan.

Instructions for Week 4		
Individual work:	Read	Turvey Chapters 4 and 18 Read the information about Freud
	Listen	To the lecture recordings
	Listen	Recording from M.E. Taylor about being a sociopath (not compulsory – but interesting – about 7 minutes)
	Do	The Freud Quiz The Horney Coolidge Type Inventory
	Do	The Readiness Activity Test
Team Work	Do	Compare your Answers on the Freud Quiz
	Do	Compare your answers on the Readiness Activity Test
	Do	Class Activities Son of Sam – Case Study (On Campus - please print off this case study, or read on line. This is the same one as last week)
	Do	Work on your learning case study
	Do	Prepare debrief for 6pm (On Campus only)
After class	Do	Send written summary of offender to Cath by Monday (25 th August)

Figure 1: Sample of weekly instructions

In relation to the team based learning there was considerable initial preparation required by the lecturer/ unit coordinator. Whilst the unit did not have prerequisites, students without a background in psychology or criminology had in the previous year indicated difficulty with some of the content which relied on prior knowledge from these disciplines. In an effort to counteract this challenge and also to replicate a workplace scenario the lecturer chose the teams. In developing the teams the lecturer noted the course in which each student was enrolled, ensuring that each team had at least one psychology and one criminology student; the idea being that each team would have the benefit of some prior knowledge that could support the team based learning in a collaborative fashion (Krishnan, Gabb, & Vale, 2011). The majority of students came from these disciplines, with the minority studying in a range of others. Each team was allocated a well-known serial offender to use as their learning case study (e.g. Ted Bundy). This required that the lecturer ensured that sufficient information was readily available to enable students to achieve the outcomes for the team based learning which was to apply the learning week by week to their case study.

Practical application of blended learning

The use of blended learning meant that students were expected to arrive at class fully prepared for the team based learning that was conducted during the face to face time. This meant that the students were expected to listen to online lectures recorded by the lecturer, to complete the prescribed readings for the week, and to complete the Readiness Assurance Test (Michaelsen & Sweet, 2011). Class face to face time was reduced by one hour to accommodate students who did not have time prior to the class to fully prepare. The Readiness Assurance Test (RAT) was developed so allow students to self-assess their knowledge of the concepts introduced in the lecture and readings and identify any gaps that they needed to address.

Class time comprised activities that supported the lecture and reading materials for the week. In some weeks short activities preceded the main activity which was the development of information on, and application of the week's learning to a known serial offender. In the two hour seminar time, students had about one hour to one and a quarter hour to work in their teams on the activities. A debrief in which each team provided a summary of their findings was held before the seminar for the week closed. This was designed to monitor the activities of the teams, allow discussion and to establish that they were making progress with their learning case study. These weekly activities were also related to the work students would need to undertake to complete their individual assessment of developing an offender profile.

Maintaining some sense of control over the learning

Despite the students being in third year final semester, the lecturer was aware that some students may not use their time wisely. The main in class activity comprised of team work in developing the case study of a known serial offender and each week applying the learning for that week to the particular offender. Teams were allowed to work in class or to go to another location such as the library or an on campus coffee shop. One reason for this was that the room allocated for the teaching of this unit was not suitable for up to ten groups to work, and pressures on space at the university did not allow for a change of room. The 'rule' was that students were expected to be in class at 4.30 (and again at 5.45pm for debrief) to participate in any preliminary discussions prior to collecting their team instructions for the class. During this time they were also expected to compare their individual RAT and discuss any differences within their team before collecting the answer sheet from the lecturer. The use of the RAT was designed to provide students with feedback on any gaps in their knowledge from that week's lecture and readings. The responsibility for making sure that the team was 'ready' for the activities was self-assessed.

In some instances additional brief 'reminder' materials were provided to the team to help them complete the weekly task. As an example, the additional material for week four of the course included descriptions from the Diagnostic Statistical Manual (DSM 5) to allow the team to identify the various disorders. Debrief was designed to allow each group to say what they had found in relation to their case study and as a measure of evidence that they had spent at least some of the time in appropriate tasks. An example of the weekly worksheet is shown in Figure 2 below.

The third measure of control was that each team provided to the lecturer a written summary of their week's findings. Team members were expected to share this task amongst the team. Additionally, this was a measure to facilitate learning.

These three measures were designed to help on campus students manage their learning, prior to class, during class, and after class.

Being aware that this unit is considered exciting and that students engage positively with the concepts, the lecturer was very careful to provide the activities each week at the beginning of class. This avoided one of the challenges reported by Mullen (2012) in which able and enthusiastic students completed work intended for completion in class prior to class; thereby unintentionally undermining one of the important aspects of the team based learning, collaboration with others. Part of the rationale for the

approaches to this unit was to provide also a sense of community which would not be achieved if students were not engaged during class time.

Week 4 Worksheet for Offender Profiling (Learning Case Study)

Last week you should have applied sociological theory to your offender.

This week you should apply each of the following personality theories and consider disorders that might apply to your offender:

Consider	Psychoanalytic theories (Freud, Horney) Trait theory (Eysenck)
Disorders	Antisocial Personality Disorder Psychopathy Narcissism Personality Disorder Borderline Personality Disorder Psychosis

Based on the information that you have garnered about your offender, write a few sentences on how each of these theories applies to your offender (or not). **Justify your response with behavioural examples from your knowledge of the offender.**

This should form the basis of your report to Cath (by 25th August)

Figure 2: Example of weekly worksheet for team based activities

Immediate feedback from students

Panic!! Despite the lecturer spending considerable time during the Week One class to explain the new delivery method, the course coordinator received a long email from three students (all the same content) raising immediate concerns about how the unit was being delivered. These students expressed concerns about listening to the lecture online before attending class and did not want to participate in team based learning. They suggested that the unit be delivered as a lecture (2 hours) and tutorial (one hour). In previous years the unit had been delivered through a weekly three hour seminar.

A meeting was arranged with these students who claimed to be presenting the concerns of the whole class. Five students attended the meeting with the lecturer and course coordinator. During this meeting it was ascertained that the students had just experienced a unit where group work was undertaken (and assessed) and that when they raised issues about the lack of participation of other students they were told they should have raised it earlier – hence their immediate response to the delivery of this unit, despite the fact that it was made clear that the assessments were to be individual, not team.

After they were reassured that the team work in the current unit was a learning strategy and that team attendance would be monitored, they appeared to be more at ease with the strategy. One attending student was concerned specifically about the online lectures indicating that they found it difficult to listen to online presentations. Another of the attendees indicated stress about being a team member in a team where she did not know others. These issues were addressed by indicating that the online lectures would be shorter than the in-class lectures and that where possible would be presented in ‘bite size’ sections to facilitate learning and allow flexibility in use of time. The student who was stressed about working with others she did not know was allowed to choose her team.

Mid unit feedback

As a matter of course, all lecturers are encouraged to undertake a short evaluation of their students’ perceptions of the unit being delivered. This occurs in week four or five of the semester and allows changes in mode of presentation and any other issues to be addressed for the benefit of students.

Twenty three students completed the mid unit evaluation. The roll for attendance numbered 60 and attendance records for the seminar revealed that 17 students had not attended the previous week (meaning that they had not participated in class for two weeks – three of these were transferring to online studies). A further 13 did not attend in the unit evaluation week, of whom one had informed the lecturer the week before. Thirty students attended class on the week of the survey. Seven students chose not to complete the evaluation.

Materials

A standard survey that had been used in previous years was used and this asked students to complete a number of questions about the unit and about the lecturer’s performance. There were also four open questions to which students could respond. A key to responses allowed for NA = Not Applicable; SD = Strongly Disagree; D = Disagree; N = Neither Agree nor disagree; A = Agree; SA = Strongly Agree, DK = Don't Know. Instructions were provided asking respondents to “Circle the response which is closest to your opinion”.

Results

Twenty three responses were received and categorised according to the key above and are shown in Tables 1 and 2. There were missing data for two questions.

Qualitative component of the survey

Respondents were invited to respond to four questions:

1. What I like most about this unit is:
2. Areas where I feel this unit could be improved are:
3. If you have/or are considering, withdrawing from this unit, please let us know why:
4. Do you have any other comments about this unit?

Table 1: Unit information

	SD	D	N	A	SA
1. The Unit Plan clearly outlines the expectations related to the unit aims, learning schedule and content.		3		16	3
2. The unit Blackboard site is up to date and relevant.			1	17	5
3. The delivery strategies (e.g. quizzes, case studies, review exercises) help me to learn and apply key concepts in this unit.	2	6	4	9	2
4. I feel that there is a reasonable workload in this unit.	1	2	5	13	2
5. It is clear to me how, and where, this unit sits in relation to my whole course and my future career.		4	4	14	1
6. This unit supports the development of academic skills such as academic writing, referencing, etc relevant to my course.		3	5	14	1
7. I have a clear idea about what is expected of me to be successful in this unit.		7	2	11	3
8. I feel confident I can succeed in this unit.		4	4	11	4
9. I feel connected to other students in this unit.		2	4	15	2
10. I am enjoying this unit.	2		7	10	2

Table 2 – Lecturer assessment

	SD	D	N	A	SA
1. The lecturer is enthusiastic about his/her teaching*.			5	11	6
2. The lecturer is knowledgeable about the subject matter and provides relevant and up-to-date examples.		1	2	15	5
3. The lecturer is well prepared.		1		18	4
4. The lecturer encourages class participation and interaction.	1		1	12	9
5. The lecturer encourages me to think and ask questions.		2	7	13	1
6. The lecturer uses language which is clear and easy to understand.			N	20	3
7. The lecturer is approachable and provides sufficient and timely assistance when required**.			1	14	6
8. The lecturer considers the diverse needs of students in this unit.	1		6	13	2

*One response of DK **One response of NA and one of DK

A content and thematic analysis was conducted in respect of the responses to these questions. The themes for what the students liked best about the unit could be placed into the following themes: Interesting content; teamwork (positive); obligation to group (negative); diversity of activities. Twenty responses to question one indicated that a number of the students found the content interesting (12); teamwork and the working with peers was appreciated (3); diversity of activities provided (3). However two respondents indicated that they only turned up to class out of a sense of obligation to the group.

Quotes from the respondents included:

The content of this unit is interesting and the lecturer knows what she is talking about.

The content is interesting and I like being able to apply it to real life cases.

Content is really interesting, having a profile to work on every week is a good way to apply knowledge.

I do not enjoy this unit (N/A). I only attend each week because of obligation to my group as there are only 2-3 people that turn up each week.

Again twenty responses were received to the question about potential improvements to the unit. The non-responders to this question were different from those who did not respond to question one. The main theme in the responses to question two was a strong negative response to the online lectures (the blended learning component). Eleven responses indicated that this was an area of concern. Other improvements related to the text book, the learning case studies for which students suggested that they all work on the same offender rather than each team work on a different one.

Specific comments included the following.

Lecture delivered on campus, less emphasis on group work and group case studies/serial killers; case studies conducted during lectures that are relevant to weeks topic.

The text book is extremely biased and is very one sided. A text that advocates different approaches and allows students to draw their own conclusions would be far more effective.

Provide an on campus lecture for ONCAMPUS students in the first hour rather than nothing.

I would prefer lectures in class! That's why I'm an on campus student.

Seven responses were provided for question three (about withdrawing from the unit). The themes were 'struggling with online lectures' and a 'lack of understanding of self-directed learning and the structure of the delivery'. Comments included:

I have considered withdrawing because I do not like the way the unit/seminar is structured / organised and I feel that this structure impedes my ability to succeed in this unit.

We are teaching ourselves basically, majority of work is unmarked, essential learning (lectures) are done on our own time.

Feel that class work isn't relevant and lectures should be given in class.

The format, doing an entire workbook for an offender that isn't marked or added to results is a waste of time and unnecessary extra work on top of doing 2 other major assignments.

Yes, because I may as well be online as I do it at home anyway.

Question four (Do you have any other comments about this unit?) was responded to by eleven students. The main themes presented were 'want lectures' and 'do not understand the learning aspects of the delivery'. Again the online rather than face to face lectures were the basis of the majority of comments (8). Only one comment was positive.

The format is alright now although it was a little difficult to get used to.

Additional comments included the issue of team attrition

Group work wise, we started with a group of 8 and haven't had more than 3 students (including me) each week. So much for group work.

This class has no difference when on campus and off campus studying is considered. Coming to classes should be more rewarding.

Conclusions

The introduction of blended and team based learning was designed to address the seven principles of quality teaching (Chickering & Gamson, 1987) and to address student feedback from the previous year as part of a continuous improvement for unit delivery. The use of student centred learning and active learning has been promoted as a way in which to better engage students and improve learning outcomes (Barr & Tagg, 1995). Considerable thought and planning went into the blended and team based learning over a period of nine months, prior to delivery; although students were not informed of the new approach until they arrived at class in the first week of semester.

The immediate reaction of some students was panic and although a meeting was held that appeared to allay their concerns, the same concerns were raised throughout the class in relation to the blended learning aspect of the change (the online lecture). Additionally attendance at class was reduced with a large number of students not present in the week that the unit evaluation was conducted. The lack of attendance by students may be the unintended consequences of the blended learning approach whereby students have the lecture and their text book and may not feel the need to come on campus. A large number of students regularly failed to come to class (approximately 50%) and this may represent a satisfaction with the online lectures, but dissatisfaction with the team based learning approach. The value of working with peers may not be important to some students whereas others appeared to value it. It would appear that if the student teams in this class were categorised into the three types finishing, performing and collaborative cultures (Krishnan, Gabb, & Vale, 2011), they would most likely fit with finishing. It appears from comments made by the respondents that there was not a lot of collaboration amongst team members and the lack of attendance by a large number of the students also suggests that team relationships were not well established in the early weeks. This may have been the result to too little time being spent on the team formation and this was the result of pressure to move into the content of the unit to ensure that the syllabus was fully addressed.

Interestingly, although I have used the term 'team' throughout my communications with students, I noted that in their responses about teams students used the word 'groups'. I intentionally used the word 'teams' as it has a different meaning to that of 'groups' (Fisher, Hunter, & Macrosson, 1997; Utley, Brown, & Benfield, 2009, 2010). The term 'group' is most likely familiar to them and in some instances the student experience of 'group' work (especially for assessments) has not been positive. The comments and themes raised in this paper suggest that these on campus students do not want flexibility in their learning. They come on campus to passively listen to lectures and are not engaged in deep learning. The work required to undertake the tasks set weekly through the blended learning would have taken more time than what students probably do, but still meeting the expected target of 10 – 12 hours study per unit. Additionally, the team based weekly learning activities replicated what they would have to do to complete their major assignment for the unit.

In this case the combination of both blended learning and team based learning may have affected students' perceptions of the learning process, despite this being explained to them in considerable length in the first class and being reiterated regularly. It may be that the introduction of each of these

strategies needs to be undertaken progressively during their university experience. Course and unit coordinators might consider these options when reviewing courses. Having some work undertaken prior to class in some weeks of several units would introduce students to the ideas of blended learning. It may also be important to develop team based learning through various activities early within the course. There was considerable consternation about the lack of assessment of the weekly team activities and this might also be a useful consideration in terms of participation marks, although this defeats the notion of team based learning. It is clear however that students need to feel comfortable with the concepts and have the benefits explained to them in considerable depth.

The lack of acceptance of these different delivery methods raises concerns about students' adaptability and skill development. These students are about to move into the workforce where adaptability and flexibility are important skills.

Lessons learned

The following lessons have been learned in relation to the delivery of blended learning and team based learning and will be applied for the next cohort.

First, time is required to develop teams, especially lecturer chosen teams in which the students may not know each other. A solution might be to allow students to choose their own teams, as this might motivate them to attend team meetings.

Second, blended learning should be introduced gradually throughout the course commencing in first year and with increasing exposure over the three years of the degree with students expected to come to class prepared for certain activity.

Third, similar to the above comment regarding blended learning, the concept of working in teams not as part of assessment but as part of learning, needs to be introduced gradually throughout the course commencing in first year. In this course a second year research unit already provides this opportunity.

Fourth, a change from the term 'group work' to 'team work' may also generate a different set of ideas about the nature of this work. Again this change in terminology and practice should be commenced in first year and enhanced across a range of units within the degree.

Finally, in future delivery, unit content in week one of semester for this unit will consist wholly of team based learning and discipline content will be completed through problem-solving activities which include reflection and self-assessment.

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Please cite as: Ferguson, C. (2015). A blend of blended and team based learning. In *Teaching and learning uncapped. Proceedings of the 24th Annual Teaching Learning Forum*, 29-30 January 2015. Perth: The University of Western Australia. <http://ctl.curtin.edu.au/events/conferences/tlf/tlf2015/refereed/ferguson.pdf>

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