

IMPROVING THE STUDENTS' TAX EXPERIENCE: A TEAM-BASED LEARNING APPROACH FOR UNDERGRADUATE ACCOUNTING STUDENTS

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ABSTRACT

Traditionally, in Australia, law tutorials for accounting students are conducted by way of a class discussion led by the tutor, as was the case of the authors' students in the 2009 undergraduate taxation law class. This paper compares the impact using two different team learning approaches in the teaching of tutorials to undergraduate accounting students studying taxation law that were introduced in 2010, 2013 and 2014.

While research indicates that team learning aids students' ability to understand and apply content, the teaching experiment in 2010 was unable to provide clear evidence for this finding. However, when a team-based learning (TBL) approach was taken in 2013–14 using individual tests and team assignments with peer reviews, the benefits of TBL were evident. TBL was associated with significantly higher levels of student preparation, engagement, participation and attendance. Student satisfaction was high. TBL also encouraged student group development and generic skills, and this assists employers. Substantial benefits were also found for university law teachers in accounting schools.

Overall, we argue that the key benefit for accounting students from TBL stems from the demand by employers for employees with soft skills who can effectively work in teams. For universities, the strategic benefit from TBL is the improvement in the quality of university courses to better satisfy the requirements of the Tertiary Education Quality and Standards Agency.

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I INTRODUCTION

A number of forces push towards innovation and the acceptance of new teaching methods in Australian university business schools. These include large class sizes and diversity of the student population, often characterised by a significant international student cohort, increasing complexity of topics (such as taxation law), growing pressures on school funding and teaching resources, and increasing focus to online teaching. The move towards greater accountability for research outputs also places added time pressure on academics to maintain teaching quality.

Additionally, with the rising use of teams in organisations there is a demand by employers for employees who can effectively work in teams.¹ This study compares the use of team-based learning (TBL) at an Australian university in 2013 and 2014 for undergraduate tax law tutorials with teaching used in 2009 and 2010.² After decades of building an evidence base of best teaching and learning practices in TBL, Michaelsen and Sweet³ added that the permanent student teams enable interlocking synergies to form and, over the duration of an academic subject, students' generic skills and intellectual (academic thinking) capacities become amplified over that time. While the benefits of TBL have been tested and confirmed in other disciplines, little research has been undertaken on the benefits of TBL for accounting students, and even less in taxation law education.

Given that there is no known research into the use of TBL in teaching Australian taxation law to university accounting students, this study aims to assess its effectiveness. This TBL experiment was conducted with final-year accounting students studying an introductory taxation law topic covering taxation policy, goods and services tax and income tax.

First, this article explores the gaps in undergraduate accounting education. Second, the mooted benefits of TBL are examined and the theoretical underpinning for the TBL experiment is set out. The TBL experiment is then detailed, the findings analysed and conclusions drawn.

Research indicates that TBL aids educational outcomes and the students' ability to apply content. This was supported in observed and reported outcomes when applying TBL with undergraduate taxation law teaching, provided that students prepare and the scaffolding is sufficient. TBL was associated with significantly higher levels of student preparation, engagement, participation, attendance and performance. Student satisfaction was high. TBL encouraged student group development, generic skills, and leadership, and this

¹ Robert Jeyakumar Nathan, Omar Shawkataly and Terence Siang, 'Universities at the crossroads: Industry or society driven?' (2013) 55(2) *Australian Universities' Review* 111; L Revere, P Decker and R Hill, 'Assessing Learning Outcomes Beyond Knowledge Attainment' (2012) 4(1) *Business Education Innovation Journal* 72.

² Larry K Michaelsen et al, 'Team Learning: A potential solution to the problems of large classes' (1982) 7(1) *Exchange: The Organizational Behaviour Teaching Journal* 13: defined TBL as 'extensive classroom use of permanent, heterogeneous, six or seven member student work teams to accomplish learning objectives'.

³ Larry K Michaelsen and Michael Sweet, 'Team-based learning', in Larry K Michaelsen, Michael Sweet and Dean X Parmelee (eds), *Team-Based Learning: Small-Group Learning's Next Big Step* (Jossey-Bass, 2011) 41–51.

assists employers and helps address the gaps in undergraduate accounting information. There are substantial benefits for universities and teachers as TBL improves course quality and builds the joy of teaching.

II EDUCATION NEEDS OF FUTURE ACCOUNTANTS

The key question for Australian business schools is the extent to which the curriculum and teaching in their accounting degrees satisfy the education needs of future accountants. While the acquisition of technical skills is important, generic skills are now of equal if not greater importance. 'Generic skills' is a somewhat vague concept,⁴ but it has traditionally included writing, verbal and interpersonal skills. Previously, accountants' career success may have been centred on their proficiency at technical skills.⁵ Today, generic skills have increased in importance, and now rank ahead of technical skills in their importance for career success.⁶ These generic skills would also include graduates being work-ready.⁷ When accounting students are prepared for the workplace, they quickly secure employment upon graduation and are successful as technicians and 'all-rounders'; this is a reflection of the quality of teaching and it impacts on reputation in the market place of the said university.

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- ⁴ Neville Bennett, Elizabeth Dunne, and Clive Carre, *Skills Development in Higher Education and Employment*, (SRHE and Open University Press 2000); Ursula Lucas et al, 'Who writes this stuff?: students' perceptions of their skills development' (2004) 9(1) *Teaching in Higher Education* 55; Despina Whitefield and Louise Kloot, 'Skills? What skills? Personal and interpersonal skills: The process of prescribing definitions in an accounting degree' (2006) Proceedings of the Accounting Educators Forum 2005 (Wagga Wagga: Charles Sturt University).
- ⁵ James E Rebele, 'An Examination of Accounting Students' Perceptions of the Importance of Communication Skills in Public Accounting' (1985) 3(1) *Issues in Accounting Education*, 41.
- ⁶ R Mathews, M Jackson, and P Brown, 'Accounting in Higher Education: Report of the Review of the Accounting Discipline in Higher Education' Volume 1 (Australian Government Publishing Service, 1990); Helen A LaFrancois, 'The marketing of an accounting graduate: Characteristics most desired by CPA firms' (1992) 67(4) *Journal of Education for Business* 206; William P Birkett, 'Competency Based Standards for Professional Accountants in Australia and New Zealand' (Institute of Chartered Accountants in Australia and the New Zealand Society of Accountants, 1993); Teo Sock Kim, B C Ghosh and Low Aik Meng, 'Selection criteria: Perception gap between employers and accounting graduates' (1993), 9(4) *Singapore Accountant* 32; Reva Berman Brown and Sean McCartney, 'Competence is not enough: Meta-competence and accounting education', (1995) 4(1) *Accounting Education* 43; Gloria Agyemang and Jeffrey Unerman, 'Personal skills development and first year undergraduate accounting education: A teaching note', (1998) 7(1) *Accounting Education* 87; Catherine Usoff and Dorothy Feldmann, 'Accounting students' perceptions of important skills for career success' (1998) 73(4) *Journal of Education for Business* 215; Bob Gammie, Elizabeth Gammie and Erica Cargill, 'Personal skills development in the accounting curriculum' (2002) 11(1) *Accounting Education* 63; Paul D Hutchinson and Gary M Fleischman, 'Professional certification opportunities for accountants' (2003) 73(3) *The CPA Journal*, 48; T Hassall, J Joyce, J Montanto and J Anes 'Priorities for the Development of Vocational Skills in Management Accountants: A European Perspective' (2005) 29(4) *Accounting Forum* 379.
- ⁷ Simon C Barrie, 'A research-based approach to generic graduate attributes policy' (2004) 23(3) *Higher Education Research & Development* 261; Bryan Howieson, 'Accounting practice in the new millennium: Is accounting education ready to meet the challenge?' (2003) 35(2) *British Accounting Review* 69.

Scott et al⁸ developed a Professional Capability framework based on research on professional competence and expertise by Schön,⁹ Morgan,¹⁰ Gonczi and Hager,¹¹ Tennant,¹² Gardiner,¹³ Goleman,¹⁴ Scott,¹⁵ Arthur Anderson et al,¹⁶ Accounting Education Change Commission¹⁷ and International Federation of Accountants.¹⁸ This framework finds that generic or job-specific skills are necessary, and that the following skills are equally important:¹⁹

- a high level of social and personal emotional intelligence;
- a contingent way of thinking, an ability 'read' what is going on in each new situation and 'match';
- an appropriate course of action, and a capacity to deftly trace out and assess the consequences of alternative courses of action;
- a set of 'diagnostic maps' developed from handling previous practice problems in the unique work context.

Building upon these concepts, contemporary authors on the education of accountants have increasingly recognised the need to develop students' emotional intelligence as necessary for accounting practice in local and global markets, which are competitive.²⁰ As well, authors have noted the value of innovation, diagnostic ability and adaptability of students to the constantly evolving labour market demands of accountants across the globe.²¹

⁸ G Scott, W Yates and D Wilson, *Tracking and profiling successful graduates*, (2001) UTS, Sydney.

⁹ Donald Schön, *The Reflective Practitioner* (Basic Books, 1983) 24, 25.

¹⁰ Gareth Morgan, *Riding the Waves of Change: Managerial competencies for a turbulent world*, (1988) Jossey Bass, San Francisco.

¹¹ A Gonczi, P Hager and L Oliver, 'Establishing Competency Based Standards for the Professions' (National Office of Overseas Skills Recognition, Department of Education, Training and Youth Affairs, 1999).

¹² M A R K Tennant, 'Expertise as a dimension of adult development' (1991) 13(2) *New Education* 49.

¹³ Howard Gardner, *Leading Minds* (Basic Books, 1995).

¹⁴ Daniel Goleman, *Working with Emotional Intelligence* (1998) Bloomsbury, London.

¹⁵ G Scott, 'Change, competence & education' in G Ryan (ed), *Learner Assessment & Program Evaluation* (APLN, 1996) 75.

¹⁶ Arthur Andersen et al, 'Perspectives on Education: Capabilities for Success in the Accounting Profession' (1989).

¹⁷ Accounting Education Change Commission, 'Objectives of Education for Accountants: Position Statement Number One' (1990) 5(2) *Issues in Accounting Education* 307.

¹⁸ International Federation of Accountants, *Pre-qualification Education, Assessment of professional competence and experience of requirements of professional accountants*, (1996) New York IFAC.

¹⁹ Scott, Yates and Wilson above n 8.

²⁰ Lyn Daff, Paul De Lange, and Beverley Jackling, 'A comparison of generic skills and emotional intelligence in accounting education' (2012) 27(3) *Issues in Accounting Education* 627; L Daff, Paul De Lange and Beverley Jackling, 'A closer look at how emotional intelligence may be used to enhance generic skills development in accounting education', *AFAANZ 2012*, Accounting and Finance Association of Australia and New Zealand (AFAANZ) 1; N A Aris et al, 'Assessment of critical success factors for accounting graduates employability' (2013), paper presented at the Business Engineering and Industrial Applications Colloquium (BEIAC), 2013 IEEE.

²¹ R David Plumlee, Brett A Rixom and Andrew J Rosman, 'Training auditors to perform analytical procedures using metacognitive skills' (2014) 90(1) *The Accounting Review* 351; Javier Montoya-del-Corte and Gabriela M Farías-Martínez, 'Accounting Training Received in College vs. Labor Market Demands: The case of Mexico' (2014) *Stanisław Juszczak* 168; Dilrabo Jonbekova 'University Graduates' Skills Mismatches in Central Asia: Employers' Perspectives From Post-Soviet Tajikistan' (2015) 47(2) *European Education* 169.

III EDUCATION GAPS IN UNDERGRADUATE ACCOUNTING EDUCATION

In Australia, professional accounting bodies and commentators have called for change in the manner in which accountants are educated.²² Commentators have found that the accounting curriculum is dominated by specialised technical skills, and this does not provide leadership, generic, professional, ethical, and lifelong learning skills.²³ These commentators found that accounting educators have failed to provide appropriately qualified graduates for employers.²⁴ In 1990, Mathews reviewed the accounting education in 49 publicly funded institutions and assessed their ability to provide competent graduates.²⁵ Mathews recommended additional resources for accounting educations so as to reform the generic skills developed in accounting courses. However, governments declined to provide the additional support. A study by Jackling and De Lange suggests that employers regard technical skills as presumed in accounting graduates, and that it is the generic skill development in graduates that are the more valued quality for employability and career enhancement.²⁶ Tempone et al undertook research involving interviews with Australian employers of graduate accountants and representatives of accounting professional bodies, finding that interpersonal skills, team work and self-management were held in the highest regard.²⁷ This study highlighted the demands upon universities to deliver accounting graduates who have generic skills and are work-ready. And while much research and practice has gone into the development of educative programs in Australia aimed to ensure work readiness of graduates, particularly accounting graduates, via 'work integrated learning',²⁸ a recent study suggests that many university educators in academic subjects may continue to lack the motivation to change from traditional

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- ²² Mathews et al, above n 6; Chant Link and Associates, 'The future for Business' (Institute of Chartered Accountants in Australia, 1998); M Simister, P Roest and J Sheldon 'The CFO of the future' (1998) KPMG for the Chartered Accountants in Business Committee, Institute of Chartered Accountants in Australia, Sydney; CPA Australia, 'Guidelines for Joint Administration of Accreditation of Tertiary Courses by the professional Accounting Bodies, Accreditation Policy Guidelines' (1996); CPA Australia and The Institute of Chartered Accountants in Australia, 'Accreditation Guidelines for Universities' (2005); Scott Henderson, 'The education of accountants—comment' (2001) 25(4) *Accounting Forum*, 398; William P Birkett, 'Competency Based Standards for Professional Accountants in Australia and New Zealand' (NSW Institute of Chartered Accountants in Australia and the New Zealand Society of Accountants, 1993).
- ²³ Wendy Crebbin, 'Teaching for Lifelong learning' in R Ballantyne, J Bain and J Packer (eds) *Reflecting on University Teaching Academics' Stories*, (1997) Canberra: CUTSD and Australian Government Publishing Service 139; R K Elliot and P D Jacobson, 'The evolution of the Knowledge Professional' (2002) 16(1) *Accounting Horizons* 69; Howieson, above n 7.
- ²⁴ Ibid.
- ²⁵ Mathews et al, above n 6.
- ²⁶ Beverley Jackling and Paul De Lange, 'Do Accounting Graduates' Skills Meet The Expectations of Employers? A Matter of Convergence or Divergence' (2009) 18(4–5) *Accounting Education* 369, 381.
- ²⁷ Irene Tempone et al, 'Desirable generic attributes for accounting graduates into the twenty-first century: The views of employers' (2012) 25(1) *Accounting Research Journal* 41.
- ²⁸ Evangeline Eljido-Ten and Louise Kloot, 'Experiential learning in accounting Work-Integrated Learning: A three-way partnership' (2015) 57(2) *Education + Training* 204; Calvin Smith and Kate Worsfold, 'Unpacking the learning-work nexus: 'priming' as lever for high-quality learning outcomes in work-integrated learning curricula' (2015) 40(1) *Studies in Higher Education*, 22; Kirsten L MacDonald et al, 'The Professional Within: Effect of WIL' (2014) 15(2) *Asia-Pacific Journal of Cooperative Education* 159; Denise Jackson, 'Employability skill development in work-integrated learning: Barriers and best practice' (2015) 40(2) *Studies in Higher Education* 350.

lecture–tutorial modes to less-traditional forms of teaching and learning.²⁹ As a result, university educators in accounting may not be contributing to the development of ‘all-rounder’ accounting graduates.

Lack of student participation is a pervasive problem in university tutorials.³⁰ In particular, this is a real issue for accounting students.³¹ In 1989, the Accounting Education Change Commission called for students to be active participants in classes rather than passive recipients of learning.³² This is consistent with Australian higher education’s shift in preference towards teaching and learning models that achieve more than just knowledge acquisition via surface learning.³³ Since 1989, many tertiary educators in accounting have attempted to reform accounting education by implementing teaching methodologies that respond to the Commission’s identified graduates’ performance gaps, particularly via the implementation of non-traditional teaching and learning applications aimed to better engage accounting students in more relaxed atmosphere that are conducive to participatory and active learning, student engagement and heightened performance in the classroom, as well as critical thinking and deep learning.³⁴ More recently, educational research focused on accounting has indicated a nexus between teaching and learning strategies aimed to encourage student participation and higher student attendance and pass rates.³⁵

²⁹ Helen J McLaren and Paul L Kenny, ‘Motivating change from lecture-tutorial modes to less traditional forms of teaching’ (2015) 57(1) *Australian Universities Review* 26.

³⁰ Jean Keddle and Eileen Trotter, ‘Promoting participation – breathing new life into the old technology of a traditional tutorial (teaching note) (1998) 7(2) *Accounting Education* 171; Paul Ramsden, *Learning to teach in higher education* (Routledge Falmer, 2nd ed, 2003);, Elizabeth Stokoe, Bethan Benwell and Frederick Attenborough, ‘University students managing engagement, preparation, knowledge and achievement: Interactional evidence from institutional, domestic and virtual settings’ (2013) 2(2) *Learning, Culture and Social Interaction* 75; Paul Kenny, ‘Innovations in Teaching Tax Law to International Business Students’ (2012) Global Business and Technology Association, Mapping the global future: evolution through innovation and excellence, New York, 7 July 2012, 367.

³¹ Pru Marriot and Neil Marriot, ‘Are we turning them on? A longitudinal study of undergraduate accounting students’ attitudes towards accounting as a profession’ (2003) 12(2) *Accounting Education* 113.

³² Accounting Education Change Commission, above n 17, 307.

³³ McLaren and Kenny, above n 29.

³⁴ Doyle Z Williams, ‘Reforming accounting education’ (1993) 176(2) *Journal of Accountancy* 76; Ellen D Cook and Anita C Hazelwood, ‘An active learning strategy for the classroom—“who wants to win... some mini chips ahoy?”’ (2002) 20(4) *Journal of Accounting Education* 297; Paul Wells, Paul De Lange and Peter Fieger, ‘Integrating a virtual learning environment into a second-year accounting course: determinants of overall student perception’ (2008) 48(3) *Accounting & Finance* 503; William B Pollard, ‘An Active Learning Approach to Teaching Variance Analysis to Accounting Students’ (2014): 8(2) *e-Journal of Business Education and Scholarship Teaching*, 69; Sidney Weil et al, ‘Using asynchronous discussion forums to create social communities of practice in financial accounting’ (2013) 25(1) *Pacific Accounting Review* 30; Syed Zulfiqar Ali Shah, ‘The use of group activities in developing personal transferable skills’ (2013) 50(3) *Innovations in Education and Teaching International* 297; Mary E Phillips and Timothy R Graeff, ‘Using an in-class simulation in the first accounting class: moving from surface to deep learning’ (2014) 89(5) *Journal of Education for Business* 241; Curtis L DeBerg and Kenneth J Chapman, ‘Assessing student performance and attitudes based on common learning goals and alternative pedagogies: The case of principles of financial accounting’ (2012) 16 *Academy of Educational Leadership Journal* 63.

³⁵ Conor O’Leary and Jenny Stewart, ‘The interaction of learning styles and teaching methodologies in accounting ethical instruction’ (2013) 113(2) *Journal of business ethics* 225.

Similarly, in the United States,³⁶ accounting bodies and commentators have argued for a change in the way in which accountants are educated. Ravenscroft and Williams, in their discussion about accounting education post-Enron in the United States, have argued that:³⁷

there are currently serious omissions from the accounting curriculum that need to be rectified, and that accounting students are miss-educated in certain critical areas. In these areas the tendency is to inculcate students with a convenient mythology rather than to educate.

Schwartz and Stout found that American practitioners had a greater preference for more practically based teaching methods than did tax educators.³⁸ Stara et al reported practitioners' preferences as being for the development of tax technical and written communication skills within university programs.³⁹ Notwithstanding acknowledgement that active learning approaches are more likely to stimulate the development of accounting students' generic skills, in contrast to traditional lecture-tutorial modes, recent research highlights that the lack of teaching skills, technologies, resources and perceptions of educators is likewise a barrier in the USA.⁴⁰

In New Zealand, Tan and Veal found that educators and practitioners both indicated a higher level of conceptual understanding for students of most of the taxation topics, compared with technical proficiency.⁴¹ Tan and Veal praised tax educators who focus on generic skills by way of case studies, group learning, problem solving, written assignments and oral presentations.⁴²

In the United Kingdom, Simon and Kedsle⁴³ analysed responses from a survey of recruiters of trainee chartered accountants to rank the important attributes of applicants. Irrespective of the gender of applicant or size of firm, they found that oral and written communication skills and team work featured in the top five attributes. Interpersonal

³⁶ Accounting Education Change Commission, above n 17; American Accounting Association Committee on the Future Structure, Content and Scope of Accounting Education (the Bedford Committee), 'Future Accounting Education: Preparing for the Expanding Profession' (1986) 1(1) *Issues in Accounting Education*, 168; American Institute of Certified Public Accountants, *Core Competency Framework for Entry into the Accounting Profession* (AICPA 1999); W Steve Albrecht and Robert J Sack, 'Accounting Education: Charting the Course through a Perilous Future' (American Accounting Association, 2000).

³⁷ Sue Ravenscroft and Paul F Williams, 'Accounting Education in the US post-Enron' (2004) 13 (S1) *Accounting Education* 7, 8, 12.

³⁸ Bill N Schwartz and David E Stout, 'A comparison of practitioner and educator opinions on tax education requirements for undergraduate accounting majors' (1987) 2 *Issues in Accounting Education* 112.

³⁹ Nancy Stara, Paul Shoemaker and James Brown, 'The curriculum required to develop a tax specialist: a comparison of practitioner opinions with current programs' (1991) 9 *Journal of Accounting Education* 79.

⁴⁰ Aldys Tan, Bickram Chatterjee and Susan Bolt, 'The Rigour of IFRS Education in the USA: Analysis, Reflection and Innovativeness' (2014) 23 (1) *Accounting Education* 54.

⁴¹ Lin Mei Tan and John Veal, 'Tax Knowledge for Undergraduate Accounting Majors: Conceptual v Technical' (2005) 3(1) *eJournal of Tax Research* 28.

⁴² Ibid.

⁴³ Jon Simon and Moira Kedsle, 'Factors affecting selection of trainee Chartered Accountants' (1997) Paper presented at British Accounting Association Annual Conference, Birmingham, 24–26 March 1997.

skills were ranked sixth, and problem-solving skills around tenth. Ranked almost at the bottom of the list of 36 possible attributes was the possession of a relevant degree. This implies that the topics studied at university are not of central importance to prospective employers. Miller and Woods found that 'in terms of transferable ability from the university taxation course to the employment situation, the universities are not succeeding.'⁴⁴ Notably, the UK's university education system is very different from that of other common law countries with respect to accounting education.

While universities work to develop graduate attributes and qualities of good communication skills, team work and inter personal skills,⁴⁵ the accounting profession is often critical of graduates' skills in these areas, indicating that this is an area warranting further improvement.

IV BENEFITS OF TBL

Michaelson et al defined TBL as 'extensive classroom use of permanent, heterogeneous, six or seven member student work teams to accomplish learning objectives'.⁴⁶ Work teams dominate industry due to long-standing and contemporary research indicators that team work leads to better decision making.⁴⁷ Business and government employers rely on work teams to achieve organisational goals, and these employers seek employees who can effectively work in teams. This is particularly the case when team players have good interpersonal and problem-solving skills.⁴⁸ Business leaders have concerns about new recruits who are technically proficient but who are socially ill equipped to solve organisational problems.⁴⁹ When employees are unwilling, unable or ill equipped to share with others this inhibits problem identification, task achievement, employee interactions and the achievement of organisational goals.⁵⁰ Other research suggests that for tasks requiring significant intentional depth, the performance of high-level individuals is

⁴⁴ Angharad M Miller and Christine M Woods, 'Undergraduate tax education: a comparison of educators' and employers' perceptions in the UK' (2000) 9(3) *Accounting Education* 223, 238–9.

⁴⁵ Tertiary Education Quality and Standards Agency, 'Process guide: applying for renewal of registration' Version 1.1 Effective from 2 June 2014, 2 To renew registration, TEQSA will need evidence from the provider of "outputs and outcomes that: demonstrate how effective your operations are in delivering positive student outcomes and experiences, while maintaining academic standards and reinforce student and public confidence in your organisation..." www.teqsa.gov.au/sites/default/files/RenewalofRegistrationProcessGuidev1.1170215.pdf.

⁴⁶ Larry K Michaelson et al, 'Team Learning: A potential solution to the problems of large classes' (1982) 7(1) *Exchange: The Organizational Behaviour Teaching Journal* 13.

⁴⁷ Richard A Guzzo and Gregory P Shea, 'Group performance and inter-group relations in organizations' (MD Dunnette and LM Hough eds), *Handbook of industrial and organizational psychology* Vol 3 (2nd ed 1992); Maneula Pardo-del-Val, Clara Martínez-Fuentes, and Salvador Roig-Dobón, 'Participative management and its influence on organizational change' (2012) 50(10) *Management Decision* 1843.

⁴⁸ E Michael Bamber, Richard T Watson and Mary Callahan Hill, 'The effects of group decision support systems technology on audit group decision making' (1996) 15(1) *Auditing, a Journal of Theory and Practice* 122.

⁴⁹ James RBaily et al, 'A model for reflective pedagogy' (1997) 21 *Journal of Management Education* 155; D G Holt and C Willard-Holt, 'Let's get real: Students solving authentic corporate problems' (2000) 82 *Phi Kappa Deltan* 243.

⁵⁰ John R Turner, Tekeisha Zimmerman and Jeff M Allen, 'Teams as a sub-process for knowledge management' (2012) 16(6) *Journal of Knowledge Management* 963.

superior to that of groups.⁵¹ Groups compromise in their decisions, and while this may result in better than average performance, it is performance at a lower level than that of the best individual performance. Hancock et al found that team work and good communication skills were highly sought after in accounting graduates by employers, and made a difference in their advancement in the workplace.⁵²

TBL has been found to increase student participation, aid educational outcomes and result in high satisfaction levels for students.⁵³ TBL assists students understanding of content and their ability to apply content.⁵⁴ There are also benefits from TBL in improving the effectiveness of teaching large class sizes.⁵⁵ Further, TBL is helpful in other challenging teaching situations such as diverse student groups, courses with extended class durations, and courses that require analytical thinking skills.⁵⁶ There are also benefits for university teachers as TBL improves the enjoyment of teaching.⁵⁷

TBL has enjoyed success in a number of disciplines such as medicine, nursing, health sciences, general embryology,⁵⁸ but there is no known Australian study of the use of TBL for undergraduate accounting students studying taxation law, although TBL has also been used in accounting education at the University of Sydney and the University of Western Australia.

Research in Belgium by Opdecam and Everaert found that TBL, applied to teaching financial accounting with first year students, resulted in the students engaged in TBL reporting higher levels of satisfaction and positive course experience when compared with a traditional lecture-based control group.⁵⁹

In the USA, Reinig et al applied TBL with accounting students in taxation law education and found that some level of team disparity among team members stimulated the development of teamwork skills, team cohesiveness, team accountability, and individual performance and improved student learning outcomes.⁶⁰ Further, Reinig et al found that a process-centred curriculum, such as that achieved via TBL, provided accounting students with an educational experience that was broader and more consistent with both the accounting profession's expectations of new graduates and modern business

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- ⁵¹ Ernest J Hall, Jane S Mouton and Robert R Blake, 'Group problem solving effectiveness under conditions of pooling vs interaction' (1963) 59 *Journal of Social Physiology* 14; Charles R Holloman and Hal W Hendrick, 'Problem solving in different sized groups' (1971) 24 *Personnel Psychology* 489.
- ⁵² Phil Hancock et al, *Accounting for the future: more than numbers* Vol 1 Final Report (Australian Learning and Teaching Council 2009), 18.
- ⁵³ Larry K Michaelsen, 'Three keys to using learning groups effectively' (1998) 9(5) *Teaching Excellence: Towards the best in the academy*, Ames IA: POD Network, <http://teaching.uchicago.edu/ete/97-98/Michaelsen.html>.
- ⁵⁴ L Dee Fink, 'Team learning: Putting "Team" into learning groups' (2007) <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.138.8502&rep=rep1&type=pdf>.
- ⁵⁵ Michaelsen et al, above n 2.
- ⁵⁶ Fink, above n 54.
- ⁵⁷ Ibid; Michaelsen, above n 53.
- ⁵⁸ Hancock et al, above n 52, 18.
- ⁵⁹ Evelien Opdecam and Patricia Everaert, 'Improving student satisfaction in a first-year undergraduate accounting course by team learning' (2012) 27(1) *Issues in accounting education* 532.
- ⁶⁰ Bruce A Reinig, G E Whittenburg and Ira Horowitz, 'Modelling performance improvement and switching behaviour in team learning' (2009) 18(4-5) *Accounting Education* 487.

practices.⁶¹ Additionally, Reinig et al found that students' attitudes towards TBL, and particularly to team assessment, were developed in the first weeks of teaching based more on their satisfaction with group members than on the teaching method.⁶² Thus, while students are assimilating to TBL, it is vital to develop team formation, the learning content and the nature of assessment for the first weeks.

A number of studies have determined the criteria used by students to determine whether a higher education course is of a higher quality than another.⁶³ Scott, Yates and Wilson found that students are most impressed when their university courses:⁶⁴

- Are immediately relevant to their particular background, abilities, needs and experiences;
- Provide more opportunities for active learning than they do for passive learning;
- Consistently link theory with practice;
- Effectively manage students' expectations right from the outset;
- Ensure that learning proceeds in a clear direction and is 'digestible';
- Use a valid graduate capability profile to specifically generate appropriate assessment tasks;
- Provide them with opportunities to pursue flexible learning pathways;
- Ensure that feedback on assessment tasks is both timely and detailed;
- Not only include opportunities for self-managed learning using both digital and paper-based resources but actively coach students on how to undertake it;
- Provide support and administrative services which are easily accessed, responsive to students needs and which specifically work together to optimise the total experience which a student has of the university or college;
- Acknowledge prior learning and make provision for its recognition in both learning and assessment.

The above criteria suggest that TBL can improve course quality and the student experience by: providing more opportunities for active learning than passive learning; using a valid graduate capability profile to specifically generate appropriate assessment tasks; ensuring that feedback on assessment tasks is both timely and detailed; and developing teams that provide support to students will improve the student experience.

Overall, we argue that the key benefit for accounting students from TBL stems from the demand by employers for employees with soft skills who can effectively work in teams. It is important that the assessment utilises reflections assignments and ongoing individual tests to dissuade free riders and ensure the integrity of TBL. For universities, the key benefit from TBL is the improvement in the quality of university topics and courses as well as student and teacher satisfaction.

⁶¹ Bruce A Reinig, Ira Horowitz and G E Whittenburg, 'Does attitude towards one's group impact student performance in a team-exam environment? A longitudinal analysis.' (2012) 5(1) *International Journal of Applied Decision Sciences* 77–96.

⁶² Bruce A Reinig, Ira Horowitz and Gene Whittenburg, 'Determinants of Student Attitudes toward Team Exams' (2014) 23(3) *Accounting Education* 244.

⁶³ G Foley, 'Understanding Adult Education and Training' (2000), Sydney, Allen & Unwin, 2nd Ed, 7.

⁶⁴ Scott et al, above n 8.

V THEORETICAL GUIDELINES FOR TBL EXPERIMENT

This experiment is based on the TBL model pioneered by Michaelsen.⁶⁵ Under this model, small-group or TBL methods can aid educational goals where the teachers motivate the students to prepare and engage in 'give and take' discussions.⁶⁶ The following three keys are considered to be important to the effectiveness of such group learning.

First, promoting ongoing accountability is vital to prevent under-preparation by students and the group work becoming a social event.⁶⁷ Thus individuals and groups should be set tasks and assessed on their success.⁶⁸ Individuals can be set individual tests, and verbal discussions for each individual can be assessed by way of peer evaluations. Groups can be tasked with assignments that require an output that can be assessed so as to facilitate an inter group comparison.

The second key involved using linked and mutually reinforcing assignments at the individual work stage, the TBL stage, and the total class discussion stage of the teaching process.⁶⁹ To optimise the impact on learning, assignments should be characterised by three S's: *same problem*; *specific choice* and *simultaneously report*.⁷⁰ Under the 'same problem', individual groups should work on the same issue. For 'specific choice', individual groups should use topic concepts to make a specific choice. Finally, groups should be required to report simultaneously.

Thirdly, practices that stimulate an exchange of ideas should be adopted.⁷¹ For assignments, this can be achieved by providing tasks that require group interaction – for example, requiring students to use course concepts to make difficult choices. Barriers to participation can be alleviated by using permanent groups, assignments, and a grading system that encourages group development.⁷² Work in the classroom is preferred, given the time constraints and difficulty for students of meeting outside class, which can limit any serious group work.⁷³ Creating diverse groups of between 5 and 7 individuals exposes students to new ideas.⁷⁴

Additionally, TBL was incorporated into a scaffolding approach to teaching. This experiment broadly follows the definition of scaffolding provided by Dickson, Chard and Simmons as 'the sequencing of prompted content, materials, tasks and teacher and peer support to optimise learning'.⁷⁵ In this experiment, scaffolding is transitory, as student

⁶⁵ Michaelsen, above n 53.

⁶⁶ Ibid.

⁶⁷ Ibid.

⁶⁸ Ibid.

⁶⁹ Ibid.

⁷⁰ Ibid.

⁷¹ Ibid.

⁷² Larry K Michaelsen, Robert H Black and L Dee Fink, 'What every faculty developer needs to know about learning groups' in Richlin (ed), *To improve the Academy: resources for faculty instructional and organizational development* (New Forums Press, 1996) 31.

⁷³ Michaelsen, above n 53.

⁷⁴ Ibid.

⁷⁵ S V Dickson, D J Chard and D C Simmons, 'An integrated reading/writing curriculum: A focus on scaffolding' (1993) 18(4) *LD Forum* 12, 12.

support from teachers is withdrawn for [OR: during?] the case study to facilitate deeper student learning and research skills.

As suggested by Michaelsen, student peer reviews of each other were also incorporated into the TBL so students could reflect on their own performance and that of their team members. McAlpine, Reidsema and Allen found such feedback enhanced students' awareness of team processes and aided their understanding that they needed to contribute to the team.⁷⁶ Abraham also established that such a student-centred blended learning approach enhanced student motivation and student grades.⁷⁷ The teams comprised randomly selected groups of students to ensure diversity as required by TBL.

VI THE TBL TAXATION LAW EXPERIMENT

Over the comparison years (2009, 2010, 2013 and 2014) the taxation law tutorials to undergraduate accounting students involved a diverse cohort of domestic and international (primarily Asian) students. The 50 minute tutorials for the introductory taxation topic ran over 12 weeks (1 tute per week) during semester one of both years. The author and other tutors presented these tutorials.

A. The 2009–10 Taxation Law TBL Experiment

In 2009, the taxation law tutorials were conducted without TBL and student participation was not assessed. The tutorials were largely tutor based, with the tutor didactically providing answers and with some prompting of students for answers and class discussion. The tutors' explanations dominated the discussion.

In 2010 some team-based assessment was introduced involving teams of 4–5 students in tutorials (usually four teams per tute group). The team work departed from Michaelsen's three keys, since weekly individual based tests were not used and team size of four was below the ideal of between five and seven. The team exercise involved approximately four multiple choice questions (MCQ). The team tutorial work was worth 10% of the assessment. Other assessment consisted of: 10% mid semester test; 30% individually based tax research assignment and 50% final exam.

B. The 2013–14 Taxation Law TBL Experiment

In 2013–14 the TBL experiment was aligned with Michaelsen's three keys by introducing assessed weekly individual based tests, a team research assignment, a reflections assignment and increasing the team size to 6–7.

In 2013 this involved a TBL tutorial exercise which constituted 5% of the assessment as well as a 5% ten-minute unseen individual tutorial test. Additionally, team work was

⁷⁶ Iain McAlpine, Carla Reidsema and Belinda 'Allen, Educational design and online support for an innovative project-based course in engineering design', in L Markauskaite, P Goodyear and P Reimann (eds), *Proceedings of the 23rd Annual ASCILITE Conference: Who's learning? Whose technology?* (Sydney University Press, 2006) 497.

⁷⁷ A Abraham, 'Teaching accounting using student-centred pedagogy: A blended learning versus a traditional approach', *AFAANZ Conference Proceedings*. 7–9 July 2008, Sydney, Australia, 1–27.

further supported by moving to a 23% team-based tax research assignment and a 2% peer review reflections assignment. The reflections assignment was designed to encourage students to reflect on their own performance and that of their team members. Other assessment included a 10% mid-semester test, 5% tutorial participation and a 50% final exam. The team-based assessment of free riders identified in the reflections assignment was adjusted down by the lecturer in accordance with the feedback provided by team members. Free riders were also identified in the weekly individual tests.

Similarly, in 2014 a TBL tutorial exercise constituted 7.5% of the assessment as well as a 7.5% ten-minute unseen individual tutorial test. Team work was again aided by a 25% team-based tax research assignment and a 5% peer review reflections assignment. Other assessment included a 10% mid-semester test and a 45% final exam.

The group members remained unchanged during the teaching semesters in 2013–14. MCQ sheets were handed out to each team at the beginning of each tutorial and the group was given about 15–20 minutes to ascertain answers. Over the ten weeks of these tests, 37 MCQ questions were provided to teams. Teams simultaneously reported their answers in the tutorials. The provision of extensive and timely feedback was a key feature of TBL. After each question, the tutor provided an explanation for the correct answer and invited discussion. The teams' weekly results (without individual member names) were published on the topic's intranet site and were accessible by all taxation law students. The grading system was designed to encourage group development and competition.

The 2013–14 experiment promoted ongoing accountability for teams (by the MCQ tests and a research assignment) and individuals (individual tests and reflections assignment). Also, the experiment involved linked and mutually reinforcing assignments at the individual work stage, the TBL stage and the total class discussion stage of the teaching process. Further, the use of the MCQs meant that the '3 S' protocol was followed. Teams were given the same MCQ tests, which involved groups using topic concepts to make a specific choice. The groups were required to report simultaneously. Students needed to use course concepts to make difficult choices. The experiment used permanent groups, MCQ tests and a grading system. All of the work was conducted in the classroom and with diverse groups of between 6 and 7 students.

Note that the university standardised the unit value of all topics offered to 4.5 units,⁷⁸ equating to 25% of fulltime workload (previously a six-unit topic, being one-third of a full-time student workload) from 2011. Thus, full-time students had to study another three topics, rather than two topics, in 2013–14, implying a higher student workload for tax law to meet the professional bodies' requirements, compared with 2009–10.

⁷⁸ To ensure consistency with other universities to facilitate improved articulation and credit.

VII TBL AND THE IMPACT ON STUDENT PERFORMANCE

A. Scaffolding

The differences in the scaffolding for student support during the 2009–10 and 2013–14 years are set out below in Table 1.

Table 1: Scaffolded Assessment Stages 2009, 2010 and 2014

2009	2010	2013–14
5. Teacher feedback to individuals	5. Teacher feedback to individuals	6. Teacher feedback to individuals and teams
		5. Individual students submit Reflections Assignment
4. Individuals analyse, research, provide written submission for case study	4. Individuals analyse, research, provide written submission for case study	4. Teams analyse, research and discuss, provide written submission for case study
3. Planning by individuals for case study	3. Planning by individuals for case study	3. Planning by teams for case study
2. Individual case study problem allocated, explained by teacher	2. Individual case study problem allocated, explained by teacher	2. TBL case study problem allocated, explained by teacher
1. Weekly tutorials with no participation marks	1. Weekly tutorial team quizzes and instant feedback provided by teacher; and participation marks	1. Weekly tutorial TBL and individual quizzes and instant feedback provided by teacher

The above table describes the scaffolding process from the beginning of the semester (level 1) to the end of semester (level 5 or 6). This shows how scaffolding increased over the period 2009–2014. In 2010, the scaffolding improved with the introduction of weekly team tests. In 2013–14, with the introduction of TBL, the scaffolding improved significantly upon the addition of individual tests, team research assignments and peer review assignments.

B. Student Performance in Tax Research Assignments

The tax research assignments¹ in the three experiment years used similar formats and levels of complexity, and identical weightings for its component parts. The student performance in tax research assignments over the experiment years is set out in the table below.

Table 2: Analysis of research assignment performance 2009, 2010, 2013 and 2014

	Fail	Pass	Credit	Distinction	High Distinction
2009 (158 students)	4 (2%)	27 (17%)	58 (37%)	38 (24%)	31 (20%)
2010 (147 students)	7 (5%)	31 (21%)	59 (40%)	32 (22%)	18 (12%)
2013 (100 students)	0 (0%)	12 (12%)	39 (39%)	45 (45%)	4 (4%)
2014 (87 students)	0 (0%)	5 (6%)	14 (16%)	47 (54%)	21 (24%)

The above table compares research assignment performance. This shows a slight drop in performance in individual research assignments in 2010 compared with 2009, with 2009 having considerably more high distinctions and a lower number of fails. In 2013–14, the move to TBL tax research assignments resulted in a significantly higher standard of assignments compared with 2009 and 2010. There were 49% (2013) and 78% (2014) of distinction and higher grade assignments compared with 44% in 2009 and 34% in 2010. There were also no fails in 2013–14, unlike 2009 and 2010. This appears indicative of generally higher quality team-based assignments in 2013–14 as opposed to individual assignments in 2009–10. This result is even more impressive given the relatively higher student workload in 2013–14 compared with 2009–10, when, as noted, the unit structure changed. This finding is consistent with the literature, which shows that TBL aids educational outcomes and improves students' ability to understand and apply content.²

¹ Paul Kenny, Michael Blissenden and Sylvia Villios, *Australian Tax 2015* (Lexis Nexis Butterworths 2015), 730–4.

² Michaelsen, above n 53.

C. Student Performance in Final Year Exam

The final exam in 2009, 2010, 2013 and 2014 involved a 2.5 hour exam paper with similar levels of complexity and formats, and identical weightings for the component parts. The following table outlines student performance in the four experiment years.

Table 3: Analysis of final exam performance 2009, 2010, 2013 and 2014 years³

	Fail (Did not sit exam)	Fail	Pass	Credit	Distinction	High Distinction
2009 (190 students)	19 (10%)	29 (15%)	55 (29%)	53 (28%)	30 (16%)	4 (2%)
2010 (160 students)	21 (13%)	30 (19%)	42 (26%)	38 (24%)	26 (16%)	3 (2%)
2013 (102 students)	7 (7%)	14 (14%)	51 (50%)	19 (18%)	9 (9%)	0 (0%)
2014 (96 students)	13 (13%)	18 (19%)	30 (32%)	22 (23%)	11 (12%)	1 (1%)

The above table compares final exam performance. This shows that the introduction of team work in 2010 resulted in minimal differences, without any positive impact on exam performance compared with 2009. The introduction of TBL in 2013–14 also was not associated with any improvement in exam performance compared with 2009–10. The exam performance appears to have declined since 2013. The number of fails remained at similar levels in all four years. However, credit and above grade students were only 27% (2013) and 36% (2014) compared with 46% in 2009 and 42% in 2010. This does not suggest that TBL works to improve individual student performance – in contrast to the finding by Reinig et al that individual performance is enhanced.⁴ However, as noted above, in 2011 the university standardised the unit value of all topics to 4.5 units, implying a

³ It is noted that fewer students completed the research assignment than completed the assessed exam performance in each of the years. This difference arose from students who did not take part in the research paper but remained enrolled in the topic (the ‘did not sit exam’ fails) or who negotiated a change in assessment that excluded the research paper.

⁴ Reinig et al, above n 60.

relatively higher workload in 2013–14. This finding is very tentative, given the differences in student workload, student numbers and potential differences in student quality over the four years. Given that this small sample set is confined to one topic, these findings are not considered generalisable for detailed statistical analysis.

D. Student Reflections Assignment

The assessed 2014 reflections assignment⁵ enabled students to reflect on their own performance and that of their team members. This provided important feedback for the teachers and students. Student feedback from the peer review exercise identifies team members who freeride, since students have to assess each team member out of a score of one to ten on their contribution, and support this with details of the individuals input. Answers to the following key questions on TBL are set out in the table below.

Table 4: Key Data TBL Survey Results in 2014

Number (percentage) of students who had no prior group work experience	1 out 96 of students (1%)
Average number of meetings	4.7
Average duration of meetings	1 hour 38 Minutes
Total average time in meetings	7 hours 18 minutes
Percentage of teams that had a leader	41%

The survey shows that almost all students had prior group work experience. A significant number of teams (41 per cent) developed leaders. This is consistent with the literature that TBL improves student leadership.⁶ A strong work ethic and an onerous research task is suggested by the average of 4.7 team meetings that totalled an average time of 7 hours 18 minutes. This provides an insight into how students work. Perhaps, greater efficiency could be achieved outside of meetings – for example, by the use of shared documents, internet and email. This also suggests that the size of the team research assignment be reduced to accommodate a more appropriate workload for a 4.5 unit topic.

Additionally, the students rated each aspect of the questions below about team harmony and performance by placing an “X” in the most appropriate box.

⁵ The reflections assignment was based on an assignment provided in 2011 by A Abraham, School of Accounting, College of Business and Law, University of Western Sydney.

⁶ Reinig above n 60.

Table 5: Average Student Responses to Likert Scale Questions on Team Harmony and Performance

	1		2		3		4	
1.Members were suspicious of each other						x		High degree of mutual trust in the group
2.Everyone worked for themselves						x		Genuine support for each other
3.Communication was guarded and cautious						x		Communication was authentic and open
4,One member dominated the group					x			All members participated equally
5.The project was clearly understood			x					The project was not clearly understood
6.Group was negative towards project						x		Group was committed to project
7.Group denied, avoided or suppressed conflict						x		Group brought out conflicts and worked through them
8.My ideas, abilities, knowledge and experience were not properly drawn out and not properly used						x		My ideas, abilities, knowledge and experience were properly drawn out and used
9.Group had no set strategies for the task						x		Group had set strategies for the task
10.Strategies were not successful						x		Strategies were successful
11.Time management was a problem for the group					x			Time was not a problem for the group
12,We had the same ideas about the questions				x				We had different approaches to

								answering the questions
13.Other people's ideas did not help my understanding						x		Other people's ideas helped me to understand the material better
14.One person could have done the assignment best						x		2 or 3 minds are more effective than one
15.The sharing of ideas and the discussions did not lead to better understanding						x		The sharing of ideas and the discussions lead to better understanding
16.It did not teach us to cooperate within a team						x		It taught us how to cooperate within a team
17.We always agreed about what to do					x			We compromised to form a united decision
18.We did not explain information to each other						x		We explained information to each other
19.I did not help my team members learn						x		I helped my team members learn
20.Individual knowledge was sufficient						x		Collective knowledge was greater than individual knowledge
21.I did not feel any accountability to my group						x		I felt accountability to my group
22.The group process did not promote learning						x		The process enabled members to learn from each other

Again, given that this small sample set is confined to one topic, these findings are not considered generalisable for detailed statistical analysis. However, the reflection

feedback indicates that the teams worked in harmony and performed well in the MCQs and the research assignment, as seen by the average 3.5 out of four ratings given for 17 out of the 22 questions. There were also good ratings (average 3 out of 4) for: members participating equally; time management; and the ability to compromise. These findings are consistent with the literature that TBL provides high levels of satisfaction and positive course experience⁷ and develops team cohesiveness, team accountability and team work skills, individual performance and improves student learning outcomes.⁸

There was a mixed response (average 2.5 out of 4) about whether or not the team members had the same ideas in answering questions. This appears to be indicative of the complexity of the TBL tutorial questions and the research assignment.

The survey also provided valuable feedback for teachers on the level of student support, as the rating for understanding the case study was relatively moderate. This appears to reflect (at least in part) the deliberate removal of scaffolding and the complexity of the case study research tasks. A number of students have difficulty in learning how to use the Australian Taxation Office legal data base and law publisher's database and/or do not appreciate the time-intensive nature of this task. This response may reflect a student overload in the topic (in particular the team research paper) compared with the standard student workload of 9 hours per week at this university for 4.5 unit topic (that represents 25% of a full-time student workload).⁹ This result is institution-specific, since other universities may employ topics that have different student workloads. For example, the workload at another institution maybe based on a 40 hour week.¹⁰

Students were also asked in the reflections assignment how they preferred to be taught in tutorials. They were provided with the three options, the student responses were as in Table 6.

⁷ Opdecam and Everaert, above n 59.

⁸ Reinig et al, above n 60.

⁹ A recommended full-time student workload consists of four topics of 9 hours workload per week each, therefore 36 hours overall study commitment per week. The impact of variation in weekly workloads within and across four topics is indeterminate.

¹⁰ For example, at the University of Sydney, for a full-time enrolled student, the normal workload, averaged across the 16 weeks of teaching, study and examination periods, is about 37.5 hours per week: <https://student.unsw.edu.au/uoc>.

Table 6: Tutorial preferences

Which teaching method do you prefer for tutorials:	2014 Student responses
A. Active learning consisting of weekly TBL tests (10% of assessment; 15 minutes of tute) weekly individual tests (10% of assessment, 15 minutes of tute) also with some tutor led tute questions (20 minutes of tute) [as used in 2014 tax law tutes]	72 (99%)
B. Passive Tutor led tute discussion questions supported by face to face lectures and text book (traditional method)	
C. Other method (students to specify) online quizzes	1
Total responses	73
Survey response rate (total 96 students)	76%

This shows an overwhelming preference for active TBL-based tutorials over traditional passive teaching methods.

Other student feedback gave further insights into the skills obtained through face-to-face team work. One student noted:

Sometimes I just cannot consider questions comprehensively and my group members help me. Every member explains their options while we discuss, this really helps a lot.

Another student stated:

The particular group worked well together and were committed to the project, so meetings and discussions were fruitful, constructive and everyone respected each other's commitment. The shared ideas and the prospect of not working alone that there is someone else to bounce ideas off and share the load. Sometimes working alone is a bit narrow and having other people to give ideas makes you expand your thinking.

E. Teachers' Impressions

As noted above, in 2009, the teaching was passive, with the tutors didactically providing answers and with limited class discussion. In 2010, teachers observed that the students enjoyed working in teams. Initially the level of team verbal class participation and discussion was rather low, but this improved significantly over the semester. Tutorial attendance was significantly higher than in 2009. A tutor in the topic in 2010 observed:¹¹

The impact on students was a positive one because the competitive nature of the team approach generated more enthusiasm and interest in the tutorial class. It provide[s] a 'light' and entertaining relief from the normal procedure which the students enjoyed and looked forward to each week. Students were more likely to attend the tute because the team questions formed part of the overall assessment. Also [this is] a good practical learning experience for the students as they have to work as a team and make decisions by discussion and consensus.

From the teachers' impressions, in 2013–14, the introduction of TBL significantly raised the level of participation and student preparation compared with 2009. TBL facilitates a more enjoyable learning experience for students. Stress and boredom for teachers and students are greatly reduced by the high levels of student engagement. These impressions were supported by the findings of improved team research assignment performance over individual assignments and in the students' responses to the likert survey noted previously. This is also supported by the literature, which shows that TBL improves the enjoyment of teaching,¹² and results in higher levels of student satisfaction and positive course experience compared to a traditional lecture.¹³

VIII CONCLUSION

In keeping with the literature, this analysis of introducing TBL research assignments, the reflections assignment and teacher impressions shows that TBL was associated with significantly higher levels of student tutorial preparation, engagement, participation and attendance. Student satisfaction was high. TBL encouraged student group development, generic skills and this assists employers. Further, there are substantial benefits for university teachers as TBL adds to the joy of teaching.

However, while the literature suggests that TBL improves individual performance, the individual student exam results did not improve with the introduction of TBL in 2013–14. The exam results in 2013–14 though were impacted by the change from a 6 unit to 4.5 unit topic as well as differences in student cohorts, and thus do not facilitate a good comparison.

Overall, as the teaching team and students found, there are clear benefits to using TBL that follows Michaelsen's three keys in the teaching of taxation law. It is submitted that the key benefit for accounting students from TBL stems from the demand by the

¹¹ T Trimboli, Feedback on TBL for taxation law tutorials, email dated 22 March 2011.

¹² Fink, above n 54, Michaelsen, above n 53.

¹³ Opdecam and Everaert, above n 59.

accounting profession and other employers for employees with soft skills and that can effectively work in teams. For universities the strategic benefit from TBL is the improvement in the quality of university courses so as to better satisfy the requirements of the Tertiary Education Quality and Standards Agency.

This study has a number of limitations. The results may be tentative given the differences in students' cohorts in the comparison years. There was a significant variance (decline) in total student numbers in the four years and there may have been some variation in student quality. Further, the transition from a 6 unit tax law topic to a 4.5 unit topic during the comparison period and the apparent higher student workloads in 2013–14 also hindered assessing the impact of TBL. The sample size was too small to allow for statistical analysis.