

Using a Learning Contract to Introduce Undergraduates to Research Projects

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Abstract: Many undergraduate Business programs aim to orient students to the research through a single-subject focussed on research design and conceptualisation. The focus of this paper is to case study a learning contract as it guides undergraduate students through a research project in a non-research methods subject and to determine the value of this process. The learning contract is a negotiated process between the learner and the academic supervisor. It is often the student's first foray into research so the staged guidelines provide supportive 'training wheels' and a detailed 'recipe' to follow. The process can be challenging for both parties as it is a scaffolded assessment with close monitoring and regular feedback. The contract has three distinct stages. The contract proposal is the first step and is where the student can choose their focus for project by articulating a learning goal and justifying why this goal is important. This is followed by the second stage of the contract which includes a literature review, reflections on readings and a detailed methodology. The final component is the learning in action (describing what they did), analysis and evaluation of their findings and a reflection on their learning. The many advantages of this assessment are it can be used in a variety of situations and with a diversity of learners; puts the students into the centre of the learning process; students can choose a learning goal that is relevant to their situation; and it can stimulate deep approaches to learning. The learning contract approach to completing a research project also develops the student's abilities in aspects of (mainly) qualitative research design and reflective practice. This paper draws on the author's 20 year experience of introducing students to research by using an assessment method that has gained positive feedback, strong student performance and high student progression.

Keywords: Learning Contracts, Methodologies, Reflection, Assessment and Evaluation

1. Introduction

The aim of this paper is to assess the value of a learning contract in the teaching of research skills and methods to undergraduates in a Business faculty. Undergraduate students in higher education are often introduced to research skills and methods in specifically designed methods subjects. These methods subjects can often be the most difficult to teach, especially if there is little connection to the students' degree (Denham 2003). Garner, Wagner and Kawulich (2009) found the disadvantages of these types of methods teaching to be academics working in isolation, no pedagogical debate around key issues, and often little guidance given to new teaching staff. Several other studies have argued that research methods are best taught throughout the curricula by creating real-world context for research methods, promoting collaborative and collegial practice through team-based research and using research to anchor the discipline (Shostak, Girouard, Cunningham & Cadge 2010; Kain, Buchanan & Mack 2001; Singleton 2007). The latter studies reflected the approach taken in this case study, that is, of embedding the development of research skills within a discipline subject.

A capstone subject in the Bachelor of Business (Management) at Charles Sturt University had a core subject in *Leadership Issues* that utilised a learning contract to guide a research project as the main form of assessment. As most students of the students enrolled in the subject were novices in the research area the learning contract guidelines were prescriptive and staged to avoid students making mistakes and/or digressing from their main goal. The learning contract allowed for goals to be visible and procedures clear and this meant less anxiety. The learning contract provided possibilities for the students to plan their learning experiences and allowed a mutual undertaking between the learner and the academic (Fedeli, Giampaolo & Coryell 2013).

A learning contract is about learning through action. In this case study it meant students could learn about something which was relevant to their current needs – within a specific discipline area and at the same time learn the basics of a research project. This paper details the learning contract process and reports on its value in the teaching of research skills and procedures..

2. What is a learning contract?

A typical learning contract as used in higher education is a formal written agreement between the learner and a supervisor which details what is to be learnt, the resources and strategies available to assist in learning it, what will be produced as evidence of the learning having occurred, how that product will be assessed and within what timeframe the learning will take place (Knowles 1975; 1986). Knowles is largely credited with being an early user and supporter of learning contracts to encourage adult learners to take more responsibility for their own learning. Anderson, Boud and Sampson (1998) identified learning contracts as one example of negotiated learning, a program of study that is jointly determined by staff and students.

Learning contracts can take many forms. They can range from being free forming to being largely prescriptive as in this study. A learning contract is used extensively in fieldwork and practice-based education situations (Alsop & Ryan 1996; Burrill, Hussain, Prescott, & Waywell 2010) where the focus is on the practical application of self-directed learning. Students can individualise their goals which reflect their own strengths and weaknesses. The learning contract used in this case study was a combination of a prescribed and detailed task on leadership issues in business but allowed for independent and self-directed learning activities. It was a plan to complete a research project for the self-directed learner but 'it is developed within parameters, sometimes quite rigid, imposed by staff adviser and is constantly monitored by supervisor' (Dixon 1991, 131).

3. Benefits and limitations

Studies have shown that embedding research methods within a discipline-based subject can alleviate anxiety and make the research more relevant to students (Beaty 1997; Callaghan 2005). Callaghan (2005), in teaching law subjects, demonstrated that teaching research skills in non-research method subjects had the dual benefit of bringing the subject to life while introducing and familiarising students with research methods. Examples and studies in sociology, law and business have shown the transference of research methods based exercises across courses, levels of courses and within the course discipline as well (Denham 2003; Frank & Scharf 2013; Gibbs 2009).

Brecko (2004, 267-268) identified the main advantages of the learning contract were:

- Learning is of interest, value or relevance to the learner
- Motivation of learners is high
- Freedom to choose the area for learning
- Learners can learn at their own pace
- The learning contract provides focus
- The learning contract respects differences in individuals
- Increased confidence and excitement in learning

Further benefits identified in other literature included:

- Value of creating a real world context for research methods (Shostak, Girouard, Cunningham & Cadge 2010).
- Strong mentoring partnership between academic and student (Leston-Bandeira 2013).

- Opportunities for self-directed learning that fosters greater accountability, responsibility and commitment (Frank & Scharf 2013).
- Develop independence in learning (Anderson, Boud & Sampson 1998)
- The learning contract exposed the student to the entire research process (Anderson, Boud & Sampson 1998).

The learning contract can aid the development of employability skills such as objective setting, negotiation, review and evaluation of one's work and acceptance of responsibility for outcomes (Lane 1988). Employers want students who understand problematic situations and can do something about them (Cameron 2007). The learning contract required the students to respond to questions such as 'what might I do better next time?' or 'how would I do things differently?' These are key phases in the research process. It is the ability to effect change that makes reflective practice so fundamental to higher education and to the graduates as they progress to the business world. What gets us from experience to understanding is reflection (Schon 1991; Kolb 1984). Boud, Keogh and Walker (1985, 19) described reflection in the context of learning as 'a generic term for those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciation'. As the students worked their way through the learning contract process for their research project they had the opportunity to develop these skills.

Business graduates need to learn about professional conduct and working with customers and clients in different situations and these require particular skills. Schon (1983) referred to the uncertainty, uniqueness and conflict inherent in professional practice. As the world is ever-changing standard procedures of analysis and action may not be applicable or appropriate in all situations. There is a need for alternative strategies. 'Messy' or 'wicked' problems need subjective processes of thinking about what you know and how to find solutions to problems. The stages of the learning contract introduced the students to ways of investigating 'messy' problems and how to deal with them. Learning contracts have been used by students in workplaces where autonomous learning is seen 'as preparation for being-in-the-world-of-change' (Gibbs 2009, 31).

The research methods utilised in the learning contract were largely limited to qualitative methods as these were appropriate to the discipline, the design and nature of the subject and, more specifically, the timeframe. Statistics were not taught within this subject. However, if the students had completed a research methods subject, for example most Bachelor of Marketing students had studied a Marketing Research subject, they could utilise statistical data analysis as part of their methodology.

Other limitations included the lack of familiarity with the learning contract approach may mean that it can take more time for students to be engaged (Brecko 2004) and the self directed nature of the learning contract may deter students who are used to traditional types of assessments. The role of the academic in introducing the learning contract process is paramount to its success (Anderson, Boud & Sampson 1998). Careful and timely instruction into the learning contract process was required.

4. Case study – The specific learning contract used in *MGT367 Leadership Issues*

A case study approach was used to detail the assessment process used in the subject *MGT367 Leadership Issues*, a final year subject in the Bachelor of Business (Management) at Charles Sturt University. The subject was offered to students in on-campus mode across several campuses as well as by distance education. Over the last 20 years approximately 100 students per year have completed the subject. This specific learning contract was introduced to the author by a colleague who came from Royal Melbourne Institute of Technology (RMIT) in the 1990s.

The subject, *Leadership Issues* introduced students to the concept of leadership and then allowed the students to choose an area from a restricted list for more in depth investigation. As the subject dealt with current issues facing leaders in the workplace the students had to collect a media file as one of their strategies in their

methodology. The issues vary but usually involved the role of the leader and the culture of organisations; ethics and social responsibility; and managing diversity.

Independent student evaluations of the subject have been collected and comments from student reflections have been collated to gain feedback on the delivery and teaching and learning methodologies involved with the subject.

4.1 The Learning Contract

The student, on undertaking the learning contract, had the responsibility to complete the contract proposal, send to and have approved by the subject coordinator; undertake the contract, record results and reflect on progress. The learning contract was presented in three stages: the proposal, Section 1 and then the final report containing section 1 and 2 (see Table 1). Each of the three staged submissions was marked, with detailed feedback, and returned to the students. Brookfield (1986, 81) noted that learning contracts were a great tool for self-directed learning but advised that ‘the ability to write contracts is a learned skill, and facilitators must spend considerable time helping students to focus on realistic and manageable activities’.

The learning contract proposal was prepared early in the semester to ensure students had eight or nine weeks to work on the action and reporting phases. The final report was submitted at the end of semester. In diagnosing their learning needs students identified the things they needed or wanted to know about (knowledge) and/or things they needed to be able to do (application) to enable them to be more effective in their current role or in a future role in business. Diagnosis was a critical first step.

Table 1: Assessment stages of the learning contract over the 13 week semester

STAGES OF LEARNING CONTRACT	DESCRIPTION
Learning Contract Proposal (Due Week 3) (Weighting 15%)	A brief written document (pro forma given to students) outlining what they want to learn within a specific topic; why they want to learn it; how they want to go about their learning; and how they intend to evaluate their learning. Approved or not approved with feedback to students. Examples of learning goals are given in paragraphs below.
Section 1 (Introduction; Literature Review; Reflections on Readings; Methodology; References) (Due Week 7) (Weighting 40%)	Students do reading on their chosen leadership issue for their literature review. This gave them a strong knowledge base on the topic and informed their methodology. They are given the opportunity to reflect on their readings to identify what they have learned, what were the gaps in their knowledge etc. The Methodology must include a media file (e.g. newspaper clippings, television news reports, documentaries) and collecting data from primary (e.g. interview of a practising manager; case study of an organisation that have access to) and secondary sources. Section 1 was submitted for marking and feedback.
Section 2 (Learning in Action; Analysis and Evaluation; References; Reflections on Learning) (Completed in Week 12) (Weighting 35%)	Students put strategies from their methodology into action; record their results and analyse their findings. Final task was a reflection on their learning as they progressed through each stage of the contract. Merged with Section 1 for Final Report.
Final Report (Due Week 13) (Weighting for Overall Presentation 10%)	Compilation of Section 1 and Section 2 to make a complete final report which is marked and feedback is given to students on both the contract goal and the reflection on their learning.

An effective learning goal must tell exactly what is to be learned; indicate by when the learning will be achieved; represent new learning which is relevant to a problem they face at work and/or relevant to their professional development needs; be drawn from the diagnostic data; be measurable (the objective must allow for demonstrated movement from one existing level of knowledge and ability to a higher level).

Examples of specific learning goals that students have chosen included:

- By July, I will have investigated how gender issues affect the roles of women and men in my local rural community, and identified some strategies to increase gender equality in the community.
- By July, I will have investigated Model II leadership in current workplaces and assessed my skills as a Model II leader, and developed, implemented and evaluated some strategies to increase my leadership effectiveness.
- By July, I will have investigated the issue of managing diversity in organisations with a particular focus on why there are more female than male primary school teachers in New South Wales public education.
- By July, I will have investigated how workplace diversity influences intrinsic motivation, particularly age and experience, and develop a strategy utilising individual differences to increase the team's overall performance.

Students nominated measures of achievement to indicate how they had reached their goal. A measure of achievement will clearly demonstrate to the student and to others the extent to which they have achieved their learning goal. The types of measures used will depend on the nature of the goal, however, some common suggestions were a written analysis of data collected during the implementation period; before and after measurements such as pre and post tests/surveys; their own reflections, observations, evaluation; and feedback from their peers, lecturers, managers etc. The final report was marked and returned to the students.

4.2 Managing and linking learning

Students were required to work on their contract over the full contracting period and they were warned not to 'forget' about their contract until that last couple of weeks before the report was due. It was critical that their learning flowed logically from their contract goal to their final analysis. What happened in one phase will determine what happened in the next. Therefore, the phases need to be interconnected and see the learning holistically, centred on their learning goal. That is, the different phases should form an interconnected whole. This would help keep learning focussed and meaningful for the students and would ensure that the final report flowed logically. The diagram below (Figure 1) outlines the connections between the different phases of the learning contract. These six phases must be planned for over the period of the semester. The *learning goal (1)* is the central driving force behind the contract. It is the focus. It will direct students to *the literature (2)* that will be reviewed. Students need to keep their learning goal in mind as they proceed through the contract. The *literature review (2)* in turn will influence what they write about in their *reflections on their literature (3)*. These reflections need to show what they have learned in relation to their contract goal. Here they also need to assess where they stand in relation to what they have read. For example, if their goal was to understand business ethics they would assess their strengths and weaknesses against some of the ideas found in the literature.

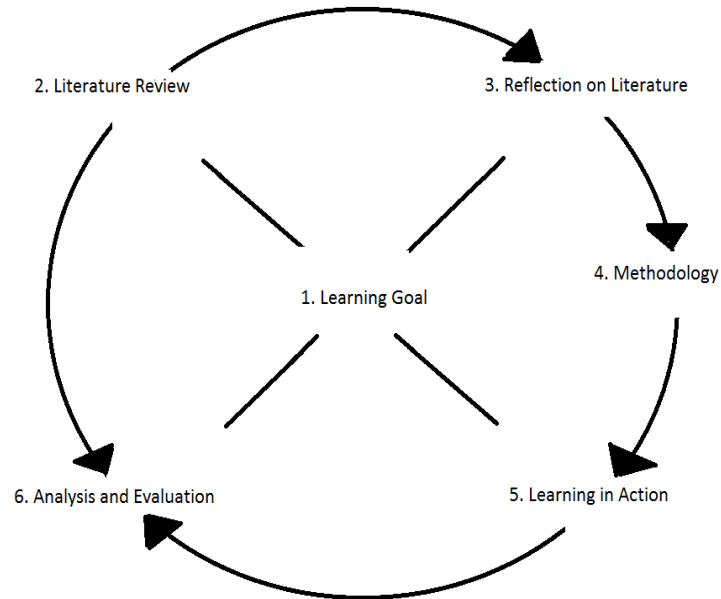


Figure 1: Connections between the different phases of the learning contract

The *methodology* (4) should identify two to four strategies that will help the students move towards their learning goal. The strategies should in turn be based on ideas they have picked up from their reading and will usually be aimed at addressing some weaknesses or problems they have identified. For example, if they are working on business ethics, their strategies might be to collect media articles pertaining to ethical issues, to interview a manager about his/her understanding of the role of ethics in business, and to collect examples of professional codes of ethics. They will also need to identify how they will evaluate their learning in action.

The *learning in action* (5) is where the student implements the strategies they have identified in the methodology, monitor how they are working and make changes to them if needed as they go along. The learning in action phase would usually take at least four or five weeks. Students are strongly recommended to record their progress in a diary as these diary notes will assist in the writing of the final report.

Once they have finished their learning in action, it is time to *analyse and evaluate the outcomes* (6). They interpret the outcomes of their learning in action and think deeply about the implications of the outcomes. For each strategy or theme the students link their outcomes to the literature they have read, showing where there is agreement or disagreement. The ability to see links between the literature and their outcomes indicates that they can think critically about the outcomes and can see how theory and practice work together.

After the students have completed the report there is one last phase, reflecting on their learning. Here is where they can step back from the content and think about how they went about doing the learning. Experiential learning readings and the Kolb Learning Cycle (Kolb 1984) are used to assist the students in their reflections. The learning contract process pushed the students to plan, act, reflect and generate ideas from analysis, which is very similar to the finer points of the Kolb Cycle.

Reflective writing as well as the more traditional scientific /technical report writing is valued in the academic and business worlds (Cameron 2007) and students to need to be good at both:

Demonstrating development at different levels and talking about it retrospectively as well as taking it forward shows a management mentality prepared to keep learning as well as being able to constructively criticise the self (Cameron 2007, 16).

Duffy (2007) believed that reflective practice was an active process of critically examining practice where an individual is challenged and enabled to undertake the process of self-enquiry. Learning is derived from experience but it does not just happen (Schon 1991). By thinking about what you are doing and why you are doing it is what turns experiences into meaningful learning.

4.3 Value to the curriculum, the students and the academics

The value of using a learning contract to introduce undergraduates to research projects went beyond the initial objective. It was found that the academics became more engaged in the teaching process and that the curriculum benefited from this different pedagogical approach.

Many things can be learned from reflection, not just by the students but also by the teacher. For academics in higher education the most immediate benefit can come from various forms of feedback from students. Beaty (1997, 9) identified that it was important to gain feedback 'as a core process throughout the teaching and learning interaction and not simply something to be done at the end of a course'. The scaffolded nature of the learning contract allowed for feedback through written reflections at the various stages and also through the student comments and queries in the online learning environment. However, often the formal university student evaluation process only was held at the end of the semester.

The academics were able to monitor the approach to the subject through this formal evaluation process. The subject, *MGT367 Leadership Issues*, over a period of several years, has consistently scored between 6 and 7 on a Likert scale of 0-7 with 7 being the highest student satisfaction rating. In 2013 the subject won a Faculty of Business Learning and Teaching Award for High Performance in Subject Evaluation. All cohorts on the various campuses and in the distance education mode scored greater than 6. The subject also had a strong progression rate of greater than 85% per offering.

Students, in the 2013 formal evaluations, stated many positive comments from using the learning contract. These included:

Thank you, I'm enjoying the structure of the subject you have brought to life.

After I got my head around the concept of a learning contract and setting my own learning guidelines, I really found this subject to be completely relevant to my own personal life and learning.

This project is the most complete, specific and prescriptive projects I have ever done.

This assessment forced me to go further than most other assessments and thus I feel like I have a deeper understanding of the subject matter and the research process.

I found the final report highly beneficial in not merely understanding corporate social responsibility, but as a deeply fulfilling, all encompassing research and learning tool.

The actual holistic approach the report took will be applied to all future reports and projects that I will undertake ... as I have learned that one angle of investigation does not deliver a full picture.

The most comprehensive and in depth assignment I have ever undertaken. It has provided me with the greatest amount of reflection and improvement strategies I, as a learner, can hence forth utilise.

Perhaps the most effective piece of learning through this subject came through the opportunity to get out and do some actual hands on work, as opposed to simply regurgitating a text book. Being able to actively engage in an area that we could determine was great, gives students good flexibility and a great opportunity.

I enjoyed doing a research project!

Students expressed satisfaction in being able to choose their topic for the learning goal. However, students also had some advice for future students. Their main points being ‘start early’ and ‘this is an assessment you cannot do at the last minute’. More than 90% of students who completed the online student experience survey in 2013 rated the subject between 6.3 and 6.5 out of 7 for the following statements:

I found this subject stimulated my learning.

I was given guidance on how to improve my work.

The quality of teaching in this subject assisted my learning.

I have developed my capacity to communicate my ideas/knowledge in this area more effectively.

The high scoring in the formal feedback demonstrated that students can become excited about the possibility of planning their own learning and, in this way, invest more energy in learning (Fedeli, Giampaolo & Coryell 2013; Knowles 1986).

The academics formed a close bond as a teaching team even though they were geographically dispersed. Regular meetings between the teaching staff and the sharing of resources created a collegial and consistent focus. The academics teaching on the subject held a review to reflect on the process and to link with tips to develop the delivery of the research process within the subject (see Table 2).

Table 2: Linking undergraduate research methods teaching and applying to MGT367 Leadership Issues (modified from Leston-Bandeira 2013)

Tips to develop engaging undergraduate research methods teaching	How applied to the design and teaching of MGT367 Leadership Issues
Focus on discipline	Embedding the teaching of research skills and methods in the discipline (leadership) subject. By choosing their learning goal, students engaged in the process because they were exploring an area of interest to them and was of relevance to their degree.
Focus on the process	Students conceptualised their own research question, planned its associated research design and then applied the project. The learning contract had a prescriptive process to follow.
Focus on the application	Methods are more exciting when they let students develop their own knowledge and understanding – so a key component of the learning contract was the Learning in Action.
Focus on the student	The learning contract was student centred. It was an active process rather than a passive one.
‘De-complexify’ it	And de-mystify the process by guiding the students step by step through the project. Shown examples of previous students’ work and discussed research ideas between students using online learning environment as well as in the classroom.
Design creative assessment	The learning contract was almost always ‘new’ to the students. Students engaged best if the teaching methods were focused on them and by applying the methods, the learning

methods	contract was designed to enable students to develop their own interests.
Utilise a blended learning approach	Online forums where students can ask questions and comment on progress; voice-over-powerpoints to fully explain each phase of the learning contract.
Enable support networks with students	Encouraged student discussion and comments on the online forum to enable better engagement and to make research seem less complicated.
Enable individual support from tutor to student	Individual support by phone or scheduled within class time. Timely after proposal had been returned and also when the student was entering the Learning in Action phase.

The learning contract has been part of the assessment for this subject, or variations of the subject, for over 20 years. The contract, when introduced by our colleague, was a welcome alternative to the traditional methods of assessment. There had been a heavy reliance on essays and examinations. The learning contract not only engaged the students in the learning process but also kept the academics 'interested' as the marking of the individual contract reports were topical and refreshingly different. The scaffolded assessment meant for easier marking as each submission built on from the previous one. From an academic's perspective the final contract report was very rewarding as it showcased the students' interests and perspectives on various issues.

The learning contract also helped to strengthen the teaching-research nexus, i.e. the many ways which teaching informs research and research informs teaching (CHEQ, Monash University 2004). In this subject, academics talked about the latest research, as well as current affairs, during their class time and then the students were required to undertake a small research project. This way, academics provided updated course and subject materials to reflect current discipline knowledge in 'leadership' whilst the students engaged with research findings and literature. The learning contract allowed the students to discover and discuss new research topics and questions. Academics shared their interest and enthusiasm for research as part of their teaching. Also, the outcomes from some of their own research in the 'leadership' area.

The advantages far outweighed the disadvantages often cited, i.e. time, keeping track of the scaffolded submissions and concerns with students with lesser ability being able to complete the contract. In fact, students of all abilities have been able to successfully engage in the process as indicated by the high pass and completion rates. Students have indicated in the formal feedback that the learning contract was 'too challenging' and the prescriptive nature of the learning contract was 'too complex'.

5. Conclusion

The use of a learning contract in the undergraduate subject for over 20 years has given the academics the opportunity to rethink and change what has not worked in the instructional practice. The subject has introduced students to the concept of learning contracts, a personal learning method that can be transferred to other contexts, especially workplace situations. From the academic perspective, staff changes have meant more teaching staff exposed to learning contracts and the associated 'instructional support and learning contract practices of learner-centeredness, student self-directedness and learner-instructor dialogue' (Fedeli, Giampaolo & Coryell 2013, 110).

This paper has described an initiative designed to integrate the teaching of an undergraduate subject through a research-led learning contract and the completion of actual research projects within the discipline. The learning contract has proven to be one of the best ways to encourage an active approach to learning and development and to introduce students to the research process. The students take an active role in diagnosing their learning needs and planning how to fulfil them. For most students, this was the first time in using a learning contract and even a first time doing a research project from start to finish. This case study has focused

on learning contracts negotiated between individual students and academics to progress through a research project in a leadership subject. The learning contract offered opportunities to make courses more flexible while fostering the development of capability..

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