Foundations of University Learning and Teaching: A Reflection on the Curriculum Alignment

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ABSTRACT

Purpose – This paper evaluates the constructive alignment of the course design within the Foundations of University Learning and Teaching (FULT) program and the extent to which the course provided appropriate skills to new academics in the university sector.

Design/methodology/approach – This paper adopts an interpretivist approach to examine whether the FULT curriculum is suitably structured to meet the needs of a diverse group of new academics. The analysis is based on interviews and personal reflections from having completed the program.

Research findings and implications – The Module three assessment item within the FULT was found not to be constructively aligned with the needs of the participants or the achievement of the stated learning outcomes. The implication is that curriculum design should involve greater attention integration and alignment of assessment items with learning outcomes. This also requires allowing for the potential diverse nature of the students as not all students are likely to have the requisite prior knowledge required to complete assessment tasks. This paper provides a conceptual model for assessing constructive alignment in curriculum design.

Keywords: Foundations of University Learning and Teaching; curriculum assessment; student experience; constructive alignment.
Introduction

The university sector in Australia has in more recent times focused on achieving a balance between research and teaching (Kulski & Groombridge, 2004). Where in the past universities were rewarded in terms of funding by the Federal Government for research outputs there has been a move towards recognising and rewarding quality teaching (Kennedy, 1995). The emphasis on teaching quality has arisen from the greater scrutiny that has come to be placed on the universities by the public, government, and the increasing competition for students (Coaldrake & Stedman, 1999). The internet has opened up the higher education sector to a global market and in Australia universities are not only facing competition from overseas universities the traditional boundaries of Australian universities no longer exists. Universities from the UK and USA have opened campuses in Australia and Australian universities have opened satellite campuses across the various states. To this end Universities in Australia have introduced various training programs aimed at better preparing new and existing academics for their role as teachers (Kulski & Groombridge, 2004).

Programs on university learning and teaching have been introduced at universities throughout Australia. The program at the University of Sydney is referred to as "Principles and Practices of University Teaching and Learning Program" unlike the University of Wollongong which refers to their course as "University Learning and Teaching" (ULT). The course that this paper will be focusing on is "The Foundations of Learning and Teaching" (FULT). This course was launched in 2007 and is compulsory for all full time academic staff at Associate Lecturer, Lecturer and Senior Lecturer levels (Malfoy & Thomson, 2010). The educational assumptions which are made in the curriculum design of this program are for the most part implicit rather than explicit. This paper examines the curriculum design, as it relates to the learning objectives and the alignment to assessment tasks.

The education literature is replete with definitions of the approaches to curriculum design (Sheehan, 1986). However, according to Kamali, Liles, Winer, Jiang and Nicolai (2006, p.364) curriculum design is ‘... analogous to reading a story backwards. You end up defining the conclusion before constructing the plot.’ In other words when designing a course one should start by identifying the required outcomes to be achieved and this in turn determines what must be taught. In turn, each of the outcome based learning objectives should be evaluated to determine the level of skill required and this may best be achieved by referring to the Bloom Taxonomy (Anderson, Krathwohl & Bloom, 2001). In effect there needs to be a balance between the learning objectives or aims of the course and the assessment tasks set to achieve these learning objectives. When the assessment tasks achieve the learning objectives constructive alignment is achieved.

The concept of ‘constructive alignment’ was introduced by Biggs (1996) as a means for checking and ensuring that learning objectives were accurately aligned with both the delivery and assessment in a course. This concept is an amalgamation of two key principles within the pedagogy:
1) That learning results from what the student does (that is student's gain meaning and learn from the activities), and
2) That to be effective teaching has to target the desired learning outcomes through activities that are appropriate to achieve the course’s set learning objectives.

This provides a simple but effective framework from which to assess the extent to which a course is constructively aligned (Biggs & Tang, 2007). In effect there should be an "essential link between the learning outcomes and the assessment method chosen" (Armstrong, Chan, Malfoy & Thomson, 2008, p. 37).

In order to better understand the relevant relationships that constructive alignment implies the following Figure 1 is presented. The relationship requires that the learning outcomes as determined in the course outline should be aligned with the teaching activities employed in the course and the assessment tasks which are then utilised in the course to measure the level of achievement of the students having completed the course.

**Figure 1:**
Conceptual Model of Constructive Alignment

The principles of constructive alignment are widely used in higher education literature (Biggs, 1996; Jones, 2006; McLoughlin, 2001). However it is now more widely used under the label of 'outcomes-based education' which is where 'standards are stated upfront and teaching is tuned to test meet them, assessment being the means of checking how well they have been met' (Biggs & Tang, 2007, p. 5).

This however, does not take into consideration the various other aspects raised in the education literature. Firstly, students have different learning styles (Kolb, 1984) which can impact upon the way they experience the teaching activities. Secondly, students from different age groups have different approaches to learning, as do students from different cultural backgrounds. Finally, students with different life and work experiences will also have varying learning differences. The key issue for designing the curriculum of an induction course for students whether from the same or
differing backgrounds would be to identify the pre-requisite knowledge or skills required to complete the program. The model is therefore developed further to accommodate the additional variables that should be considered in the course design and is presented in Figure 2.

**Figure 2:**
Conceptual Model of Constructive Alignment and Course Design

![Conceptual Model of Constructive Alignment and Course Design](image)

The aim of this paper is to evaluate the assessment of module three of FULT and the learning outcomes with respect to constructive alignment. In evaluating the constructive alignment of the assessment task and the learning objectives specified it will also become apparent that the implied pre-requisite knowledge and skills required are lacking. FULT participants from both industry and academic backgrounds have been considered regarding the lack of constructive alignment of module three with the learning outcomes of the course, and the difficulty of completing the module when not having the pre-requisite knowledge and skills as referred to in model 2.

*Problem Statement*: Whether the assessment task in module three is constructively aligned with the learning outcomes of the course.

**The Study**

The module outline was examined using the constructs identified in Figure 2 with a focus on the constructive alignment between the learning outcomes, assessment tasks, and teaching topics. The FULT Overview together with the Module three assessment task details are presented in Appendix A.

Structured interviews (Sekaran, 1992) were conducted with two current students enrolled in the FULT. The structured interviews provide an alternative perspective to the evaluation process. The two students are from differing backgrounds. One student from industry, that is a non academic
background and the other is from academia. The interview transcripts were analysed using narrative analysis. The narrative analysis was chosen because the respondents were part of the stories they told not merely observers. The student participants are referred to as interviewee N, (non academic background) and interviewee A (academic background) to provide anonymity. The transcripts of the interviews are presented in Appendices B and C respectively.

FULT comprises three modules and three assessment tasks. Whilst module one and module two and their related assessment tasks appear to be constructively aligned (Biggs & Tang, 2007) module three does not. The aims or learning outcomes stated in the overview at the beginning of the FULT course outline are presented in Table 1 below. It should be noted that all of the learning outcomes are addressed in modules one and two.

### Table 1.
**Overall Program/Course Alignment**

<table>
<thead>
<tr>
<th>Learning outcomes (on completion of the course students should be able to:)</th>
<th>Modules (more than one module may address the learning objective)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. value the diversity of student experiences and backgrounds, and appreciate the ways in which students learn;</td>
<td>M1; M2</td>
</tr>
<tr>
<td>2. value and share individual and colleagues’ experiences and knowledge of learning and teaching;</td>
<td>M1; M2</td>
</tr>
<tr>
<td>3. design effective learning experiences for students for face-to-face and blended learning environments;</td>
<td>M2</td>
</tr>
<tr>
<td>4. plan and design effective teaching strategies;</td>
<td>M2</td>
</tr>
<tr>
<td>5. choose and design appropriate strategies for assessing student learning, and for evaluating teaching;</td>
<td>M2</td>
</tr>
<tr>
<td>6. reflect upon feedback from students and colleagues in order to improve teaching practice, and</td>
<td>M2</td>
</tr>
<tr>
<td>7. utilise policies and guidelines relevant to learning and teaching.</td>
<td>M1; M2</td>
</tr>
</tbody>
</table>

FULT is an introduction to university teaching and learning. With the implementation of module three which requires an evaluation of a teaching and learning practice in your discipline which implies a research background as a pre-requisite knowledge or skill it is evident that little or no recognition is made of the potential diversity of backgrounds of the participants Universities in general select staff for either their experience and expertise in the particular discipline or their academic research experience. Subsequently, the participants can be expected to come form differing backgrounds and have differing work experiences which may or may not include research practices..

Despite the lack of the pre-requisite knowledge and skills required the fact still remains that module three is still not constructively aligned with the course as it is not incorporated in the learning outcomes (Table 1).

For a course to achieve constructive alignment it would be necessary to ensure ‘that there is consistency between objectives, learning activities and assessment’ (McLoughlin, 2001, p. 21). Rust (2002, p. 156) recommended that when setting an assessment task all course modules or units should follow a constructively aligned design model, which would ensure that all assessment tasks, and assessment criteria, clearly and directly relate to the learning outcomes.

A matter for concern was that the assessment task in module three required the use of statistical methods and knowledge of research methods in general which was not covered in the learning outcomes and certainly not constructively aligned with the learning outcomes of the course. The aims of the program contained no reference to the requirement for the completion of a research project. This was a point of contention which was raised in the interviews, with interviewee N making the comment - "Where is the introduction seminar for us to tackle research in an academic sense?" a similar concern was also raised by interviewee A with the comment that - "someone with no research background would have a problem".

This lack of congruence is contrary to the application of constructive alignment where 'in order to achieve constructive alignment, it is proposed that designers map out their intended curriculum goals, learning activities and the tools they intend to use' (McLoughlin, 2001, p. 21).

Module three also included a pre-requisite knowledge and skills component which was not addressed; referring to Figure 2 this is essential to achieve the learning outcomes implicit in achieving constructive alignment. The task required students to undertake a research activity and use 'an appropriate qualitative and/or quantitative method of evaluation to collect evidence about the implementation of the innovation.' (TDU, 2009 module 3, p. 4). As mentioned previously the research activity was not mentioned in the overview and there was an assumption that the participants had prior research training.

When designing module three the pre-requisite knowledge and skills in research were apparently not adequately considered. In effect curriculum design should involve reflection regarding questions such as: 'What is my definition of design? How should I construct the course to ensure that students see this definition clearly? What strategies do I believe designers should use? Is it important to teach about other definitions, or strategies?' (Dinham, 1988, p. 22.). In addition when determining whether a set learning task has been designed well, it is important to look at the 'aspect of teachers' work 'teaching-as-design' (Goodyear & Markauskaite, 2008; Ellis & Goodyear, in press, Ch 7). Within the aims of the course module three was not included and this highlights a lack of attention to the minimum elements required when establishing a course. In this aspect the course design lacked alignment between the learning outcomes and the assessment tasks.

The major problem with module three within the FULT is the 'one size fits all' approach. According to Nagy and McDonald (2007) this approach results in a 'discriminatory process treating all students as if they were a homogenous group'. According to Goodyear and Markauskaite (2009, p. 155) 'Teachers have a responsibility for working out what tools and resources students need to complete the task' and accordingly the curriculum design of FULT needs to take into consideration that participants come from both academic and non-academic backgrounds. The concept of academics coming from different backgrounds is not a new idea nor is it innovative, the premise from which programs such as FULT are derived. Boud and Brew (1996, p. 19) pointed out the need for 'recognising that many academics come from non-traditional
academic backgrounds, either from disciplines new to universities or from non-university contexts, training is being provided in research skills'. As an induction program FULT was not constructively aligned between the learning outcomes and the assessment tasks. This is a matter of concern since "Successful induction programmes are those that are able to take into account the needs of the individuals concerned" (Coleman, 1997, p. 159).

For research to be recognised as an integral part of the FULT program it should have been incorporated within the learning outcomes and this should occur in stages ideally starting at the beginning of the course. The assumption that students will all possess research knowledge was a flaw in the module and the overall program. By contrast an induction course conducted in Israel to help upgrade teachers to researchers was of a much longer duration 'a year-long course in research methods' (Coleman & Katz, 2001, p. 227). As raised by interviewee A “they should provide maybe 10 pages, a clear guideline or maybe they can bring someone from the office of research in to teach us about research in one or two sessions.” A year long subject is hardly required for all participants, however, for the participants who do not have research experience perhaps the Graduate Certificate in Research studies (GCRS) may be appropriate after completing module two as they would be better prepared to complete module three. Interviewee A had already completed GCRS and as a result indicated a belief that they would have no problems completing module three where as interviewee N stated that “I would like to do the research certificate first to have an understanding of what is required from methodology so that journals can be targeted and there is something in return for the work”.

When the pre-requisite knowledge and skills is not evident as indicated in Figure 2 the learning outcomes cannot be achieved. FULT is an induction course for new academics, however an important aspect to being a successful academic is to develop a research portfolio. FULT in its current structure supports the consensus that for most academics 'the processes involved in learning their research role remain essentially secret or craft knowledge: under-researched and little disseminated' and the fortunate 'individual academics may be inculcated into the mysteries of research in their academic career by a more senior and experienced colleague’ and ‘if not, they will likely just pickup such knowledge as they can, by trial and error, as their career develops (Blaxter, Hughes & Tight 1998, p. 289). As stated by interviewee N she will need to tackle module three with “lots of questions of other staff members’” but foresees that a problem could be “answers are varied” so inevitably she will “go it alone”.

The lack of determination of pre-requisite knowledge and skills in module three is by no means an isolated occurrence in higher education. The difference is that in some cases remedies are put into place. An example where changes were made was in a medical school which when encountering the problem 'with faculty members being asked to assume academic duties for which they have received no training' developed a new program which included 'instructional development (all faculty members should have access to teaching-improvement workshops, peer coaching, mentoring and/or consultations)' (Wilkerson & Irby, 1998, p. 387).

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In 1996 Jenkins wrote an article entitled 'Turning Academics into Teachers: a response from a 'non-academic' unit'. The current structure of FULT, would suggest that the dilemma of turning teachers into academics, or in some case non-academics and non-teachers into academics, still exists.

A decade and a half has passed since Boud (1995, p. 35) noted that 'if as teachers and educational developers, we want to exert maximum coverage over change in higher education we must confront the ways in which assessment tends to undermine learning'. This is a timely reminder to ensure that learning outcomes are clearly defined which are in turn congruent with the teaching activities and assigned assessments tasks.

**Conclusion**

Module three was not constructively aligned in FULT, it was not incorporated in the learning outcomes and there was a problem with the integration of the pre-requisite knowledge and skills which were required to complete the module. The teaching activities and assessment tasks in module three were attached to an item which had no learning outcome. Referring to Figure 2 it is essential that teaching activities and assessment tasks be linked to a learning outcome whilst taking into consideration pre-requisite knowledge and skills required to complete the assessment task.

This paper is subject to the limitations which generally apply to reflective analysis in particular that conclusions are based on interpretations and in this case additional supporting evidence was also limited to only two interviews.

As a result of this investigation concern is raised regarding module three of FULT and the curriculum should be revised. The most important aspect should accordingly be attending to the alignment of the learning outcomes with the assessment task. A further point to consider is the possible diverse backgrounds of participants, that is, academic and non-academic backgrounds. This would require a reappraisal of the pre-requisite skills and knowledge that under the present structure has been omitted or simply assumed. Perhaps students that do not posses a research background, may be better served by the provision of a refresher course. In view of the circumstances it may be opportune to consider the relevance of the modules from the Graduate Certificate in Research Skills as a means to address research training and this approach may also allow for economies of scale.
References:


Malfoy, J & Thomson, R (2010). Teaching @ UWS, University of Western Sydney.


Teaching Development Unit (TDU) (2009). Foundations of University Learning and Teaching Unit Outline, University of Western Sydney.

Appendix A:
FULT Program Overview and Module 3 Assessment Task

Overview

The Foundations of University Learning and Teaching program is a professional development program for practising teachers offered by the Teaching Development Unit.

The program provides staff the opportunity to enhance their teaching effectiveness through the integration of skills, reflection and the experience of teaching within a collaborative learning environment. Participants will be able to explore a variety of ideas and approaches to teaching in higher education. The Foundations program promotes the educational theory and practice nexus, linking the work completed during the program to the individual’s own learning and teaching practices. Teaching is a social activity. Seeking feedback from colleagues and students and reflecting on university teaching lies at the heart of the program.

The aims of the Foundations program are to enable participants to:
8. value the diversity of student experiences and backgrounds, and appreciate the ways in which students learn;
9. value and share individual and colleagues’ experiences and knowledge of learning and teaching;
10. design effective learning experiences for students for face-to-face and blended learning environments;
11. plan and design effective teaching strategies;
12. choose and design appropriate strategies for assessing student learning, and for evaluating teaching;
13. reflect upon feedback from students and colleagues in order to improve teaching practice, and
14. utilise policies and guidelines relevant to learning and teaching.

Modules and assessment

The Foundations program is comprised of three modules:

Module 1: Teaching Skills Workshop
Module 2: Learning Through Reflective Practice (LTRP)
Module 3: Negotiated Project

Assessment consists of three module assessment tasks, each of which could become part of a participant's professional portfolio. Assessment is 'Proficient' or 'Not yet satisfactory'.

A Certificate of Completion will be issued by the Teaching Development Unit to participants on a satisfactory completion of the program. Staff who complete the Foundations program can seek advanced standing for one unit in Deakin University's online Graduate Certificate in Higher Education (GCHE)

Module 3 Assessment task

The Module 3 Assessment task - Negotiated project must be satisfactorily completed in order to complete Module 3. An abstract must be first submitted to the program coordinator for approval.

Your Negotiated project is assessed as follows:

Criteria
Defend a design for a teaching innovation or resource
Explain constructive alignment of learning outcomes, teaching and learning activities and assessment tasks
Use a method of evaluation
Discern the significance of evaluation results
Self-assess your development as a teacher
Assess implications for teaching practice in your discipline and higher education generally

Standard
The Negotiated project is graded as either Proficient or Not yet satisfactory.

Proficient
The project report builds solidly on an aspect of critical reflection on teaching practice in Module 2 and involves scholarly inquiry into your practice. There is a considered rationale for creatively integrating blended learning and/or redesigning assessment to engage students. The rationale for the innovation is supported by relevant links to theory and evidence from the literature. An appropriate qualitative and/or quantitative method of evaluation is used to collect evidence about the implementation of the innovation. There is evidence of critical reflection on personal development as a teacher. Wider implications for practice in the discipline are selectively explored, showing a willingness to submit the project work to peer and public scrutiny.
Appendix B:
Transcript of interview with Interviewee N: industry background non academic

What is your professional background?
*Industry related-a junior accountant through to CFO. Financial reporting, treasury and corporate board level*

What are your academic qualifications?
*An undergraduate degree in accounting. A post graduate in IT e-commerce and CPA.*

Do you have any research background?
*No academic research*

Have you ever been involved in a project that involved extensive fact finding or literature reviews?
*IT project to put e-commerce into our organisation. Yes extensive fact finding. Literature review no never*

What is your interpretation of the task assigned in module 3 of FULT?
*To extend on module 2 findings from the reflective journal and do an academic research project.*

Do you have any plan in place to tackle this task?
*Short answer is No, however to start lots of questions of other staff members resources from the past conference. Basically go it alone unless you ask the questions yourself*

Do you foresee any problems?
*In asking other staff members answers are varied. That the amount of time, I personally want a return and that is a publication for our school so NEAF is a problem. Conflicting answers from staff. Just where is your starting point. Where is the introduction seminar for us on how to tackle research in an academic sense. Because fact finding in industry is very practical whilst academic research appears to be very labour intensive. Which is not a concern if you get a return.*

What do you think you will do to solve any perceived problems?
*I would like to do the research certificate first to have an understanding of what is required from methodology so that journals can be targeted and there is something in return for the work i.e publication. Module 1 and 2 has been extremely beneficial to the teaching. The reflective journal has been excellent and the feedback from facilitators has been good. However module 3 feels very removed from what we do in teaching and a vast jump not an extension and should more likely be reconsidered on how it is implemented timing wise or even if it is required at all.*

Do you have any other concerns in relation to module 3?
*No.*
Appendix C: Transcript of interview with Interviewee A: Academic

What is your professional background?
I am a qualified CPA and have some professional experience in the accounting industry. I also worked in a tax practice in Australia.

What are your academic qualifications?
Masters from University of Takka. Master of Professional Accounting from UWS. Now I am doing my PHD in management accounting.

Did you have to do any courses prior to commencing your PHD?
Yes I had to complete a GCRS - Graduate Certificate in Research Studies course. It is like a bridging course for those who have no research background they have to do this course before they start their PHD.

Do you consider yourself from industry or an academic?
An academic.

Do you have any research background?
Research background. Only one publication

Have you ever been involved in a project that involved extensive fact finding or literature reviews?
A little bit GCRS a warm up for PHD, it teaches you to learn how to do a literature review, how to search for articles and different methodologies of research, it was training then I started my PHD I did lots of literature reviews.

What is your interpretation of the task assigned in module three of FULT?
With the topic you select you should have an idea about methodology, you need to study a literature review to have your theoretical background then you have to plan your project. Your project must be supported by methodology. You must underpin the methodology you are going to use and also by an extensive literature review and to get it published it must be supported by the most recent literature.

Do you have any plan in place to tackle this task?
I will decide after completing my reflection on module 2. At this moment I don't have any plan.

Do you foresee any problems?
For me as an academic I will not find too many problems but some cases someone with no research background could me misleading as it mentions a method but there is no clear indication of what is the method. Anyone without research background would have a problem.

What do you think you will do to solve any perceived problems?
I was confused when they have asked for an abstract at the beginning. An abstract comes after you have done the whole project. After the literature review and you work with your methodology and you have findings. How can you write an abstract without findings. It is not possible especially for an exploratory project as we have no idea.

How do you do it without doing the research.
I will give a proposal for the purpose of the study not an abstract.

Do you foresee problems for other participants coming from a non academic background, and if so how do you think they could be solved?
For people with no research background I think in the module they should provide maybe ten pages, a clear guideline indicating how to do a literature review and if you want to use a methodology and what are the sources. Indicating some of the sources would be helpful and also to provide a step by step basis.

I think it is a very small research project.

I believe the project is quite easy with research training. The GCSR is designed for the purpose of research training which is missing in this course. I don’t know maybe it is not their job. Maybe they can bring someone from the office of research in to teach us about research in one or two sessions.