## OWNED ENVIRONMENTS: TAKING PROPERTY INTO FIRST YEAR OF A BROAD DEGREE

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## **ABSTRACT**

The University of Melbourne's New Generation Degrees, taught since 2008, locate undergraduate property education as a major in a multi-major broad-based 'Environments' degree. This degree is a multi-faculty in its teaching and governance. By 2010 property emerged as the second largest major without a specific presence in the first year foundation subjects.

A 2011 review of the degree recommended two changes for property – adjust the major to further increase its coherence – and introduce a property-related subject into an enlarged suite of first year subjects – Owned Environments.

Owned Environments has multiple objectives. First is to introduce the property major taken from second year, but in such a way that did not alienate the 'non-property' cohort. Counter-intuitively the subject is not a prerequisite for the major. Second make the content broad enough that students with any major in mind could get skills and approaches to take into their major. Third was to, potentially, contribute to the university's 'breadth' subjects in other degrees.

A multi-faculty, cross-disciplinary team developed and taught the subject for the first time in 2013. It was founded pedagogically on ownership as the interaction of legal, social and economic systems. This was developed in topics on, for example, the rights and responsibilities of legal ownership, planning systems' modification of rights, basic economic models that explain the environment's shape, introductory property valuation, ownership in other countries and of other environmental goods, like water.

A Melbourne suburb was used as a 'laboratory' for assessment that ranged from understanding ownership at the suburb level down to valuing an individual property. Fun and challenging collaborative learning was encouraged through assessment using a student Wiki, a planning dispute role-play, and a group valuation project. Individual learning was tested in a traditional, end-of-semester exam.

Student feedback indicates that they enjoyed the subject but scope for further improvement exists. How the subject bridges into the property and other majors will become evident next year when this year's cohort progress into their majors.

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**Keywords:** 

#### **Background**

The University of Melbourne's New Generation degrees (aka the 'Melbourne Model') represent one of the most transformative changes in higher education in Australia's history (Symons, 2010). For the University's accredited property program this meant two things. One was that it became standalone undergraduate and graduate programs separating from its previous association with construction in 'Property and Construction' degrees. The second was the New Generation degree that had a 3+2 structure where a 3-year broad-based, pre-professional undergraduate degree was followed by a 2-year professionally accredited Masters program. The first intake of approximately 350 undergraduate students was in 2008 with the first of these students graduating in 2010. The first Masters students graduated in 2008 (their intake year) because of transition arrangements available to graduates from the old degrees. The first Masters' completions through the Bachelor of Environments pathway graduated in 2012. The undergraduate program is the focus of this paper.

#### Literature review

Learning involves mastering the four categories of knowledge denoted by (McGraw and Harbison-Briggs, 1989) – *episodic*, which is experiential; *semantic*, which is words and symbols' meanings; *declarative*, which has to do with facts (what); and *procedural*, which is how to perform. The latter is critical for professionals but the others are also necessary and in many instances are foundations for procedural knowledge. Furthermore, learning is both accretionary and self-reinforcing whereby new knowledge adds to existing (accretion) and where connecting to existing knowledge reinforces that prior learning (de Bono, 1969).

In education, there is ongoing debate as to how closely teaching curricula should reflect directly the attributes that employers seek from graduates. While professional competencies can be measured, and in many ways assessed objectively, the work of Archer and Davidson (2008) identified a range of 'soft' skills, including analysis and decision-making skills, communication skills, planning and organizational skills and strong literary skills that do not necessarily fall within the mandate of university degrees. Poon *et al* (2011) identified 72 characteristics (31 knowledge areas, 20 skills and 21 attributes) that were felt to reflect the desired qualities for professional real estate employment. However, they also identified a potential conflict in that to increase teaching of soft skills within a degree's timeframe, there would need to be a trade off in the technical knowledge being taught.

## Property and the Environments degree

The undergraduate property program is located within a Bachelor of Environments (or Environments) degree and was first implemented with the following structure:

- A common first year of two core subjects and 4 other first year elective subjects selected from a pool of six acting as a series of 'pre-major' subjects. These were all styled as '... Environments', for instance Reshaping Environments or Constructing Environments;
- A nine-subject pre-professional major (11 majors in the Bachelor of Environments degree) starting in second year. Typically the number of major subjects increased in each semester over the second and third years of study. This allowed students the possibility of exploring one or more majors in second year before declaring their major. One or more first year elective subjects could be required or recommended for students taking a particular major;
- A capstone to the major synthesing knowledge from the major. In property, as in some other majors, this was further designed to expose students to professional practices and disciplines to facilitate a transition to post-Bachelor of Environments employment;
- Three electives taken from other Bachelor of Environments majors; and
- Six breadth subjects to be taken in a contrasting learning mode. For property this meant that its students were not able to take commerce subjects as this was deemed too similar (other than a couple already incorporated in the major and as breadth subjects pre-approved for accreditation purposes). The required number of breadth subjects was later changed to a minimum of four and a maximum of six with the 'spare' subjects taken as Environments' electives. At least two breadth subjects had to be taken as Level 2 and 3 subjects. A maximum number was also specified for all Level 1 subjects taken in the degree.

While not uncommonly called a 'generalist' degree by critics of the model, with an inference that it contained little of value to professions in the undergraduate degree, in the Bachelor of Environments it is clearly evident that professional knowledge was covered in many of the majors though these are not accredited in their own right. This is why it would be more correct to call the Bachelor of Environments a broad, pre-professional degree. The 3+2 structure owes something to the European Bologna model and the format was included here to facilitate students transferring into international postgraduate study, both inbound and outbound. The broadening occurred in several ways. The most obvious one was within the breadth subjects and the second was from the non-major Bachelor of Environments electives in second and third years. The third way was that five faculties 'owned' the degree contributing one or more majors to the degree and to its governance. The broadening was a key pedagogical design in the degree to equip graduates for future lives that might contain multiple careers, not necessarily in their originating discipline.

For property there was no clear 'property' subject at first year. This was an issue that was of concern to accrediting bodies. Constructing Environments was required and Governing Environments was recommended for those undertaking a property major. Other issues emerged for property such as very large cohorts in early subjects in the property major that were largely populated by Commerce students. These did not have the same restriction on breadth subjects in property that property students had on commerce subjects. Another issue was that the only time that property students were alone in a subject was in the capstone as this was not available to neither non-major nor breadth students. Both these issues present interesting challenges in creating cohort experiences for property students.

#### The 2011 Bachelor of Environments review

Following the first intake's graduation in 2010 an extensive review of the degree was commissioned and occurred in the second half of 2011. By this time the intake numbers had grown to approximately 800 and property had emerged as the second largest major as evidenced in capstone subject numbers (43 in 2010 this grew to 60 in 2011), students taking the first subject in the major increased from approximately 250 in 2009 to in excess of 400 in 2011 and in those declaring their major across first to third years (190 (11.07%) in 2011).

The review made a number of recommendations including:

- Increase the number of first year subjects to relieve some of the pressures on class sizes from increased intakes, to build better bridges between the experiences of first year subjects and the majors, and to expose students to a greater range of pre-major knowledge areas in the hope that they may elect to not study in the largest major Architecture. Five new subjects were proposed in the review of which three were actually implemented in the first year of change. One of these was styled as 'Owned Environments' and was conceived as being a 'property' subject;
- Increase the number of core first year subjects to three and to reconfigure some of them to more fully represent different knowledge forms and to spread that across the dimensions of Human-Social to Scientific-Technical, and Natural to Built Environments;
- Review the property major to further increase its coherence (After: University of Melbourne, 2011).

## **Conceptualising Owned Environments**

When first conceptualising Owned Environments during the 2011 review several key ideas and understandings influenced its suggested design:

- Reference to the first property subject in the old degree structures which had been successful taught into multi-disciplinary cohorts of students;
- The subject, while nominally 'property' was an Environments subject and needed to address a wider audience that just property major students. Majors where it was felt that this subject could be particularly useful were Geomatics and Landscape Management but it was also thought that it would be generally useful in most other majors by introducing ownership concepts as a basis of action in environments;
- The subject might also have value for the wider University as a breadth subject in other New Generation degrees. Understanding ownership concepts would be useful for all educated and informed citizens:
- Exposure to property ownership concepts and contexts from past Pacific Rim Real Estate Society conferences, papers on water rights, and other property law matters. This meant that research informed the teaching at the most introductory level of the curriculum;
- Exposure to ownership contentions like Melbourne's Save our Suburbs in the late 1990s (Lewis, 1999);
- Teaching was required across the contributing faculties in the first year subjects. To this end a multidisciplinary steering group from Property, Planning, Land and Environments, and Geomatics (Engineering) to further develop the subject and ultimately provide teaching into the subject; and
- That it was not going to be a required subject for the Property major. This counter-intuitive idea was based on the principle of not making it, in effect, a tenth subject in the major which would be inconsistent with the degree's philosophy and similarly to support of the philosophy of allowing flexibility in testing possible majors before selecting one. That incoming students with a property focus would probably take the subject anyway this non-requirement was a way of potentially attracting even more students into the Property major.

## Owned Environment's pedagogical rationale

Four key ideas underpinned the subject's pedagogical rationale that shaped the initial conceptualisation and its subsequent development:

- There are three contributory systems to understanding ownership issues social, legal and economic;
- Property rights and associated responsibilities are constructed from and evolve within those systems.
   That evolution would be found in both changes in attitudes to ownership of residential real estate in Australia in the last century, and also in the changes found in the Anglo-Australian legal, social and economic systems through history;
- Residential property is a useful introductory learning vehicle because this would be most familiar to students; and
- The Australian property context provides a potentially familiar basis to explore ownership (for domestic students at least). From the familiar, the examination of ownership would expand to unfamiliar locations (other countries) and unfamiliar goods, like water. Moving to particular unfamiliar locations also provides an opportunity for international students to connect with something familiar.

This resulted in the subject revolving around three key themes: *Ownership*, an exploration of what ownership means in the broadest sense, taking the view that to own anything comes with a set of rights and obligations and what this means. As it proceeds to the second theme, *Value*, the subject examines the evolution of residential property ownership in Australia, with a particular emphasis on the difference between economic value and other value systems such as cultural and societal value. This discusses the way that different kinds of value can influence the shape and development of cities, the impact that planning schemes and real property can have on individual rights, as well as how other factors affect residential property values. The final theme in the subject, *Economic Value*, brings a more practical set of concepts to the hard dollar calculation of property values and, by way of introduction, the resultant application of these in real world contexts.

## Delivering the subject in 2013

The multi-disciplinary steering group oversaw and agreed the curriculum framework put forward by the subject coordinator (the lead author) consistent with the pedagogical rationale. Detailed development within the framework was carried out by the property program and individual academics in the other disciplines and faculties. The property program's contribution was the lead author as subject coordinator assisted by the coauthors and the discipline's sessional property law lecturer. This work developed the 'property' content, the assessment tasks and tutorials that specifically supported those tasks. Individual academics in other disciplines and faculties developed their own content for lectures and tutorial exercises. The final, twelve week program apportioned responsibility for content as follows:

Property
Planning
Land and food resources
Geomatics
Urban design
62.8% (5.5 weeks plus introduction and summary weeks)
16.5 % (2 weeks)
8.3% (1 week)
4.1% (0.5 week)

100%

This shows that the objective of multi-disciplinarity was met and also to some extent how property intersects with other areas of society.

The subject had a Senior Tutor—a practice usual in first year Environments subjects where there are more than 200 enrolments—for two days a week. The enrolment number was unknown in the time of making the appointment but in light of the development phase of the project it was felt that this appointment was a reasonable because of the pressure it would relieve. Their role was to:

- Operate as a first line of contact for students with subject queries;
- Organise and manage other tutors;
- Take a number of tutorials;
- Be responsible for development and maintenance of the online Learning Management System(LMS) including operationalising Assignment 1's Wiki-based assignment; and
- Manage the conduct of assignments and their marking.

In addition, a small number of tutors (three other than the Senior Tutor and the Subject Coordinator) were employed with the idea that having few tutors give multiple tutorials was preferable to having a large group of tutors giving one tutorial each; and there is a general issue in the availability of tutors in property. Through this we were able to run the subject in a responsive and proactive manner, using the tutors experiences of their own students (as many as 50 students for some tutors) to adapt the tutorials and content week to week. This adaptation was supported by weekly meetings between all tutors and the subject coordinator.

As the subject was taught in first semester of first year, socialisation into university life was thought to be an important part of the subject's remit. This occurred in two aspects in group work. As a soft introduction to the idea of working with peers, and as a way to enable every student to meet and speak with at least one other student, students were allocated into groups of two for the first assignment. They were asked to complete a general, non-assessable subject task in Week 1 (The 'ice-breaker'): Meeting their partner for a coffee (or similar beverage). From this they were to prepare, for the subject's website a 140 character, tweet-length review of the drink and another of what they expect to get out of the subject. Representative samples are included in Table 1.

Table 1. Sample 'tweets'

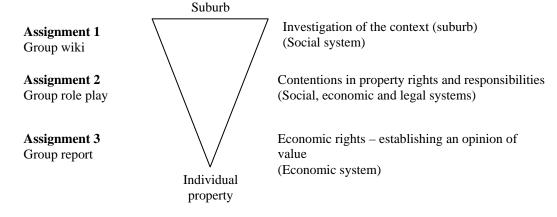
Coffee	Subject learning
We have the coffee review at Patter Coffee Shop at swenton street ( <i>sic</i> ). The rich flavor that was experienced within the coffee was simply terrific. We have now completed our photo's in Northcote and have both submitted our work in.	We feel prepared for the rest of the semester and it was great meeting each other in the icebreaker activity!
We find a coffee shop on the high street ( <i>sic</i> ) when we are on the way to do the assignment. We both choose the hot chocolate, it is a good choice fo the cold day, especially when it is rainy. It warms our wet body, and gets some time to wait for the rain stops.	Learning about the ownership of the individual properties, and its rights and responsibilities. Also how the economic, legal and social systems influence the ownership of the property.
Coffee = $B+$ , atmosphere = $A+$ , weather = $C$	With any luck our work will equal the atmosphere,
@ThousandPoundBend.	not the weather.

The 'tweets', of which these are a sample, showed that the students had entered into the spirit of the exercise with the tweets ranging from quite serious reviews of the beverage and the venue, to the ironic and the amusing.

#### Assessment

Assessment consisted of an end-of-semester examination and three assignments spread over the semester. The assignments used a metropolitan Melbourne suburb as a 'laboratory' to get the students to engage with a range of issues in ownership in environments across the various systems of the pedagogy. Over the course of the semester the assignments move from understanding ownership matters at the whole of suburb level as a social phenomenon to the individual property and its economic characteristics (Figure 1).

Figure 1. Assignment tasks, structure and pedagogy



The suburb of Northcote was selected as a 'laboratory' for several reasons. It had evidence of the evolution and development of ownership patterns and land use over time including occupation prior to white settlement; it has been a locus for contentions around redevelopment and urban intensification with attendant testing of property rights; and it was readily accessible by public transport. It is intended to vary the subject suburb in future years in order to inject interest for students (and staff), and to limit plagiarism of previous years' work.

Assignment I's investigation of the nominated suburb's context was conducted as a group Wiki where students developed the assignment report collaboratively using the Wiki function on LMS. The Senior Tutor's available skill lead to his suggestion that the assignment be conducted this way. Having had the suggestion, this approach seemed a useful way of increasing the use of IT in the subject as this had been an item that traditionally scores poorly in the SES across many subjects, and as a way of introducing a bit of fun into activities while still having serious learning outcomes.

The assignment brief contained instructions for a staged sequence of weekly investigations to build their Wiki. These included:

- The suburb's current patterns and forms of land tenure;
- Its history and evolution development and subdivision; and
- Historical tenure evidence of prior occupation.

The assignment's rubric contained the requirement that the material evolve over the assignment period. This was easy to monitor as the Wiki gave the subject staff the capacity to view and review all previous versions of the report. The Wiki was 'frozen' at the due date and time. Work completed after that was obvious because of the date stamps on Wiki entries. We could assess the last version before it was due.

Assignment 2's investigation of contentions in rights and responsibilities was based around two sites in the suburb where multi-unit developments were proposed and had been contentious, in that they had gone to the Victorian Civil and Administrative Appeals Tribunal (VCAT). One site was used as a learning case study and the second was used as the basis for an in-class role-play. The first property was used to investigate the issues, the various parties involved, and what rights and responsibilities were affected and modified through the planning processes. In this case the students were provided with copies of the VCAT ruling, a gallery of pictures of the site and the neighbourhood, and weblinks to the relevant planning scheme. For the second site used in the role play students were provided with copies of the plans for the proposed development that went to VCAT, and a gallery of pictures of the neighbourhood. They were not provided with a copy of the ruling as this was not available because it was a (relatively rare) mediation hearing rather than a full hearing. This was also useful in that students were not able to pre-judge the outcome; they needed to explore it for themselves. This would suggest that future iterations of the subject where other sites are used should follow a similar practice of not making any rulings available. If students seek them out for themselves then that would not be a bad situation as it meant that they were fully engaging with the problem. Students were not required to visit the two sites (hence the galleries of pictures) but could visit if they wished to.

The role-play was framed as a mediation meeting prior to the Council making a decision. This is consistent with the operation of the Victorian planning system where there are objections to any proposed development. Pairs of students took on various roles, for example, the Councillor chairing the meeting, the owner/developer, the design architect, neighbours, and community interest groups. To develop the learning necessary to successfully enact the roles the three weeks of tutorials prior to the role-play week were spent reviewing the first case study site, the operation of the planning scheme, the second site's proposed development and how the mediation meeting worked. We awarded marks for attendance in these three weeks plus the role-play because it was felt this would incentivise the attendance necessary to complete the learning and avoid the embarrassment of being poorly prepared in the role-play. Every tutorial's role-play was different based on the different dynamics in it, the arguments made and the decision made by the Councillor as to their voting intentions for the Council meeting. We were quite happy with this prospect as it reflected what happens in real life and we expected that students in different groups would compare their experiences and would learn from making sense of the differences. The role play itself was assessed and a written reflection of their learning about property rights, their contentions, and modifications was the final piece of assessment in this assignment.

Assignment 3 was a fairly conventional (from a property perspective) valuation report for a non-apartment residential property valued using a comparison approach. The objective here was to get students to engage with

notions of economic value and how things like individual and collective rights and responsibilities inferred by or enshrined in planning schemes and Rescode translate into such opinions about economic value.

## Students and majors represented

128 students completed the subject (17.4% of the 737 students admitted to the Environments degree in 2013. Of these 128 students 67 identified their intended major in the subject's Student Experience Survey (SES) (Table 2). This is only an indicative figure as students are not required to declare their major until the end of their first year. The subject's representativeness of the Environments' cohort can be ascertained by comparing this subject's indications of major with those of the degree as a whole taken from the surveys form the two Semester 1 core subjects. This can help identify whether some of the subject's pedagogical objectives have been met.

**Table 2. Majors represented in Owned Environments** 

Major	% in Owned	% in total 1 <sup>st</sup> year	Over	Under
	<b>Environments'</b>	Environments	represented	represented
	cohort (n=67)_	cohort (n=566)	(no. of times)	(no. of times)
Architecture	0.0	27.4	Unable to say	Unable to say
Civil systems (Civil engineering)	4.5	7.4		1.7
Construction	9.0	2.1	4.2	
Environmental engineering systems	3.0	1.8	1.7	
Environmental geographies, politics and culture	22.4	3.4	6.7	
Environmental science	4.5	1.9	2.3	
Geomatics	0.7	0.2	3.5	
Landscape architecture	0.0	2.1	Unable to say	Unable to say
Landscape management	0.0	0.9	Unable to say	Unable to say
Property	36.6	4.8	7.7	
Urban Planning and Design	9.0	5.8	1.5	
Undecided/unstated/other	16.4	37.9		2.3

It can be said that students in this subject are more certain of their major than the general first year cohort with Undecided/unstated/other being 2.3 times under-represented. This analysis also shows that the design disciplines are completely unrepresented in Owned Environments. In some ways this is not surprising as these have the most demands placed on them with required first year electives and they have more elective subjects available they might consider more relevant. It is nonetheless disappointing as the objective of having an offering of use to all other majors has not been met in 2013's teaching of the subject.

Property is the most over-represented major (7.7 times over-represented) closely followed by Environmental geographies, politics and culture (6.7x). The former was not surprising as it was thought that students entering the degree intending to do the property major would naturally gravitate to the subject. This also supports the decision to not make it a required subject for the major as they appear to be taking it anyway. The latter major was initially a little surprising but further reflection suggests that the major's interests, as evidenced in the title, could well find support in the subject's topics. Other over-represented majors include construction (4.2x), Environmental Science (2.3x), Environmental engineering (1.7x), and Urban Planning and Design (1.5x). Of these, some fit with Construction can be envisaged given some of them will have property development as an end objective and this would fit that. Some synergy with the other two can be envisaged as the fields could engage with ownership's social and legal dimensions. Little can be interpreted from the Geomatics results as this represents a single student and they appear to have taken Owned Environments anyway.

The engineering major Civil systems is 1.7 times under-represented but this is not surprising as they also have quite specific requirements for first year electives. The other major that was thought would benefit from this major (Landscape Management) was also under-represented – none of the five students nominating this as their major took this subject.

#### Review and revise

Student feedback on the subject was collected in the University's normal Student Experience Survey (SES) conducted each semester in each subject. In addition, anecdotal, in-tutorial feedback was obtained on students' experience of the subject which suggested that they had had fun. Overall, the subject received 3.9 (out of 5) on the SES' 'Overall, this subject has been well-taught' question. This was the second highest score within the first year subjects behind the top scoring subject's 4.1. The first year subjects, particularly the core subjects, seem to have stubbornly below average scores so 3.9 is a very good result, especially so for a subject taught for the first-time.

Comments provided by students similarly supported this, such as:

- Definitely a very enjoyable subject that is interesting to learn.
- Some topics were quite dry but the lecturers did a great job in keeping the students attention. It made learning a lot easier.
- Thoroughly enjoyed learning an array of topics including property law, urban development and property valuation. Each week focused on a different area in relation to owned environments, which I thought was really interesting. The readings were also interesting, and relatable to the lecture content.
- Tutors and lecturers are full of passion.

However, dissatisfaction was also registered with comments like:

- This subject was the worst subject I have done so far. It was horribly planned and I didnt (sic) enjoy a single lecture. This subject should be a law subject and not an environments subjects. Please consider doing this.
- I would say that there needs to be more of a clear link between the content of the readings with the lectures and the tutorial exercises. I found that in some instances there was little connectivity between the three aspects of the subject. However in most cases I could see the content of the lectures being applicable with the tutorial exercises and assessments (*sic*) (a not uncommon sentiment).
- Materials from lectures and readings need to be integrated more into tutorials and assignments (also a not uncommon sentiment). 2 hour tutorials are also needed to accommodate this (longer tutorials were mentioned a couple of times in the 'could be improved' comments).
- Monday lecture times and Lecture recordings without the visual material was also not uncommon.

Assessment results varied over the semester with good to very good averages in the first two assignments (74.3% and 77.1% respectively). The evidence showed that the students were engaging very actively with the concepts and learning opportunities. The third assignment's average was lower (68.8% average) and the assessors reporting that they struggled a bit more with this task. The examination results were markedly lower again (61.8% average). A total of 41.2% of the subject cohort scored less that 60% in the examination with 17.8% failing (<50%). This suggests that they might have been struggling with the multiple topics have too much content within them that they were trying to memorise rather than engaging with the systems concepts. It is reasonable to suggest that student examination preparation was affected by the lack of previous examinations for practice. Because of this absence a series of typical examination questions were prepared for revision, including the identification of key examination words like 'identify' and 'illustrate' and how they should be interpreted. Also, the revision lecture was only one hour which suggests that this should be revisited for 2014.

The subject's steering group are also about to meet to debrief 2013 and to suggest revisions for 2014. Several issues appear to warrant attention, including the quantum of detailed content on topics; suitability of some of the readings and connection with lecture and tutorial material; support for learning in Assignment 3; and the revision lecture and tutorial timing and support for examination preparation.

How the subject bridges into the property and other majors is also an open question and will become evident in 2014. This warrants further investigation at that time.

#### Discussion

Taking property into first year of a broad degree that contains specific vocational property education later in the degree presented a unique challenge. This was because the task contained four distinct aspects:

- 1. Introduce property specific knowledge suitable for potential property practitioners without usurping later, formal property education in the degree;
- 2. Understanding the forms of property knowledge useful in other knowledge and professional fields;
- 3. Understanding the forms of property knowledge useful as a general citizen; and
- 4. Accommodate the transition from secondary school, and settle into the degree before deciding their major.

Conceptually, this task required recasting property knowledge as general 'education' rather than specific 'training' for professional practice as vocational knowledge is taught elsewhere in the degree. There was an opportunity, given the property major was being revised at the same time as Owned Environments was being developed, to create a subject that explicitly linked with and was required for the major. Something like this exists in other majors where there are required first year subjects before commencing the major. However, in the spirit of the degree, this was not done with this subject and the property major. Instead it was taken as an opportunity to promote property to a wider cohort and not exclude those that wished to explore other options before finalising their major – something that was consistent with the philosophy of the degree.

That this was appropriate can be seen in the fact that 63.4% of Owned Environments' students did not intend to take the property major and 37.9% of the entire first year cohort did not report their major at the end of first semester. Regardless, in the context of a broad degree, it is important to cater for a breadth of thinking and to try to engage these students with content that will aid them in future semesters. We did this by:

- Varying assessment methods so as to provide students with a number of ways to engage with the subject, and equally to improve the chances of students being able to find an assessment method that would work to their strengths;
- Creating student groupings early in the semester, in an attempt to make the first weeks of their university life structured, but less intimidating. We also worked deliberately within the second assignment to try to create cohesive tutorial groups to better the experience of the subject;
- Giving students background information that would be useful within the degree, including an introduction to writing, referencing and researching; and

Introducing students to big concepts that are broadly applicable from the Owned Environments sphere, where equally the concepts can be built upon in subsequent years of the major, but can also be reapplied in other majors. This approach allows us to take a longer term view of the balance between soft and hard skills that graduates of property degrees require for professional practice. It recognises that hard, professional knowledge is taught in semesters 3 to 10 of a probable 10 semester education. This gives an opportunity, at this first year level, to bring in fundamental broad and soft skills useful in property (Poon et al., 2009) and in all employment (Archer and Davidson, 2008). Nevertheless, hard property skills are introduced as a 'taster' for the property major. This allows students to compare Property's requirements with skills they already have that are useful in many professions, and to compare Property with other skills encountered in other first year Environments subjects. For those subsequently attracted to the property program as a result of Owned Environments it means that students innately bring some fundamental soft skills desirable for employability (analysis and decision-making skills, communication skills, planning and organizational skills and strong literary skills).

While graduates, even after 10 semesters of education, are still not 'finished products' and require further training in the profession (Poon et al., 2009) it is important for an introductory subject within a broad degree that does contain introductory professional skills, like Owed Environments, to understand what knowledge it contributes to operating professionals – property or otherwise. To understand this required moving beyond instrumental property knowledge and engaging with fundamental ideas about knowledge forms. McGraw and Harbison-Briggs' (1989) four knowledge categories were useful here because professional action requires procedural knowledge of how such professionals act, albeit founded on the other knowledge types. Various aspects of Owned Environments' curriculum can be shown to correspond to these categories of knowledge (Figure 2).

Figure 2 Categories of knowledge in Owned Environments

Knowledge type	Owned Environments' activity
Procedural	Role play in planning and rights
How to perform	Valuation exercise
Declarative	Lectures and readings
Knowing what	Examination
	Assignments
	Role play in planning and rights
Semantic	Lectures and readings
Meaning and usage of words	Examination
and symbols	
Episodic	Ice-breaker exercise
Autobiographical/	Site visit
experiential	Role play in planing and rights
	Valuation exercise

While there is specific value to potential future property professionals engaging with the subject's knowledge forms in this way it would be useful for many potential professionals as befits a first year subject within a broad, pre-professional degree.

#### Conclusion

The recent refinement in the University of Melbourne's Bachelor of Environments to include Owned Environments as a first year pre-major property subject offered a unique challenge and opportunity. This was not only within the context of the degree it serves, but also in the property educational world. While acting as a possible but not obligatory introduction to the property major, the subject needed to be broad enough to serve other majors in the degree and as general education through property concepts. The multi-disciplinary, multi-faculty team that developed the subject used as guiding three systems that contribute to ownership in and of environments. Collaborative, fun, learning exercises were created to engage students with knowledge which, while having a discipline slant was not intended to be purely instrumental knowledge for professional property practitioners. Feedback shows that most of the subject's objectives have been met, but that there is scope for further improvement in coming years.

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