

# STUDENT PERCEPTIONS OF THE QUALITY OF PROPERTY EDUCATION IN AUSTRALIA: 1994 – 2009

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## ABSTRACT

*Using the Graduate Careers Australia's Course Experience Questionnaire (CEQ), the students' perceptions of the quality of property education in Australia is assessed over 1994-2009. Analyses are presented for the major property universities in Australia regarding good teaching and overall satisfaction, as well as the property discipline benchmarked against the property-related disciplines of accounting, building, business, economics, law and planning. The link between good teaching and overall satisfaction, and the delivery of added value by property programs are also assessed. Changes over this 16-year period are highlighted in terms of student perceptions of the quality of property education in Australia.*

**Keywords:** Property education, GCA CEQ student perception survey, benchmarking, teaching quality, student satisfaction, improvement, added value.

## INTRODUCTION

With property degree education having been in the Australian university sector for over 35 years, recent years have seen considerable change in property education. This has seen increased maturity in property education; seeing curriculum change and a moving beyond an initial valuation focus to now offering property education opportunities across the full breadth of property disciplines (Newell, 2007; Newell and Eves, 2000). The property education landscape has also seen an increased number of universities offering property programs, reflecting increased student demand, and an

increased recognition of the significance of property as an asset class, and as a key ingredient in the local and global economy. This is further reflected in the strong property industry linkages between the API and the RICS and the property education universities in Australia, via the accreditation process for property programs. This has seen over 13 Australian universities accredited by the API and RICS to offer property programs meeting the education requirements for API and RICS membership.

Importantly, research into property education issues has received an increased focus in Australia. From the initial papers by Whipple (1968, 1980), highlighting the emerging requirements of establishing property education programs at a university level, this has seen a diverse range of property education research papers from property researchers in Australia in recent years, including:

- Curriculum development: Baxter (2007), Newell and Eves (2000)
- Property career preparation : Avdiev (2000), Blake and Susilawati (2009), Everist et al. (2005), Page (2008)
- Education needs for property professionals: Boyd (2000a, b)
- Opportunities for property academics: Boyd (2010), Newell (2007)
- Property education paradigms: Fischer (2000)
- Property education quality: Newell (2003)
- Effective use of new technology: Cornish et al. (2009).

This body of knowledge in property education has been further supplemented by property education research at an international level, including:

- Curriculum development: Black and Rabianski (2003), Webb (1997), Weeks and Finch (2003)
- Property industry requirements: Callanan and McCarthy (2003), McCarthy (2009)
- Education needs for property professionals: Manning and Epley (2006)
- Student assessment strategies: Manning (2002)
- Teaching strategies (including problem-solving, communication and professional ethics): Anderson et al. (2000), Born (2003), Ford and Elkes

(2008), Miles and Trefzger (2006), Wolverton and Wolverton (2003), Yiu (2008)

- Property education paradigms: Yu (2000)
- Added-value role of property academics: Manning and Roulac (2001)
- Property student success factors: Allen and Carter (2007).

Whipple (1968, 1980) were the first papers to be published on property education in Australian universities. Whipple (1968) reviewed the Land Economy subject in the post-graduate property program offered at the University of Sydney; focusing on the structure, content and lecture sequence. Whipple (1980) assessed the emerging requirements in property education, across the areas of valuation, property management and land policy. It particularly highlighted the need for an increased focus on property rights in the fuller understanding of the institutional framework, political processes, legal structure and economic environment for property decision-making. The need to address the professional needs of the property industry via these property education programs was also clearly highlighted.

This focus by Whipple (1968, 1980) on the professional needs of the property industry in property programs in Australia links into the recommendations of the recent Bradley Review of higher education in Australia (Commonwealth of Australia, 2009; DEEWR, 2008). These Bradley Review recommendations see the need to produce graduates for full participation in society and the economy, as well as providing a stimulating and rewarding higher education experience. This has seen increased funding to support improved teaching and learning in Australian universities, and the evaluation of performance and best practice for quality teaching and learning. With property being a key ingredient in both Australia's society and economy, the importance of quality teaching and learning, and the need for professionally relevant property courses is clearly highlighted. While the systematic evaluation of the students' learning experience in Australia (via the CEQ process) was not introduced until 1993, the issue of delivering quality professional education programs for the property industry is implicit in both Whipple (1968) and Whipple (1980). The assessment of good teaching and overall satisfaction of property degree students in Australia is the focus of this paper.

Increasingly, it has also been recognized that evaluating student perspectives on their perceptions of their university education experience is an important area of research (eg: Cherry and Dave, 1997; Cohen, 1980; Haddad, 1999; McKone, 1999; Wagner, 1999); with typically exit surveys involved. Importantly, much of the recent property education research in Australia has also focused on evaluating these student perceptions (eg: Blake and Susilawati, 2009; Cornish et al., 2009; Everist et al., 2005; Newell, 2003; Page, 2008). This has taken on increased significance in recent years in

an increasingly competitive university environment, as universities seek to improve teaching standards and the student learning experience by evaluating and benchmarking performance, and monitoring changes in the student education experience. This has seen increased university funding in Australia partly linked to improved quality of university education.

In Australia, Graduate Careers Australia (GCA) surveys over 150,000 graduates annually using the Course Experience Questionnaire (CEQ) to assess student perceptions of their university learning experience. This CEQ survey has been used previously (Newell, 2003) to assess student perceptions of the quality of property education in Australia over 1994-2001. Given the significant changes in property education in Australia in recent years (eg: diverse range of delivery strategies for property programs, curriculum developments, involvement by property industry), this paper analyses these CEQ surveys over 1994-2009 for the major Australian property universities. In particular, the issues of whether the student perceptions of the standard of property education in Australia has improved in recent years and how the standard of property education compares to other property-related disciplines are critically assessed; with the ongoing implications for the quality of property education highlighted.

## **THE UNIVERSITY EDUCATION CONTEXT IN AUSTRALIA**

Australia produces over 150,000 degree graduates per year. Over 88% of graduates were seen to be broadly satisfied with their university education in 2009, with 79% being in full-time employment within four months of completing their degree with a median salary of \$48,000; even in the difficult employment environment of the global financial crisis (GCA, 2009). By 2020, it is expected that 40% of 25-35 year olds in Australia will have attained a university degree; significantly above the current level of 29% (DEEWR, 2008).

Requiring universities to produce graduates with knowledge, skills and understanding for full participation in society and the economy, the Australian government is currently seeking to transform the Australian higher education system to achieve this 40% target by 2020, responding to the “Bradley Review” of Australian higher education (Commonwealth of Australia, 2009; DEEWR, 2008). With Australian university student satisfaction with the quality of teaching and learning lower than that seen in the UK, US and Canada (DEEWR, 2008), this comprehensive reform of the Australian higher education sector has seen \$1.5 billion allocated to be invested in teaching and learning, and providing students with a stimulating and rewarding higher education experience.

This increased funding for teaching and learning will see the implementation of a quality assurance and regulatory framework that enhances the overall quality of

teaching and learning, as well as a greater focus on accreditation, quality standards and outcome measures. The establishment of the Tertiary Education Quality and Standards Agency (TEQSA) in 2010 as an independent national tertiary education regulatory body will enhance the quality and accreditation in higher education through evaluating performance, promoting best practice and establishing benchmarks for quality teaching and learning (Commonwealth of Australia, 2009); supplementing the existing procedures for monitoring academic standards by the Australian Universities Quality Agency (AUQA, 2009). With this increased focus on teaching and learning quality, university funding will be linked to the improvement of standards, and from 2012 those universities meeting specified targets will receive additional performance-based funding. 2012 will also see the establishment of the “My University” website to facilitate better decision-making by potential university students in their university and course selection; particularly in a fee-paying environment for both local and international students.

Despite a 57% increase in student/staff ratios over 1990-2007 (DEEWR, 2008) and increased levels of teaching casualisation impacting on teaching quality (Brown et al., 2008), there is a general view that the quality of teaching and learning in Australian universities has improved in recent years as reflected in increased GCA CEQ scores. Contributing factors include increased use of information and communication technology to increase access to education, increased focus on good teaching in many universities (eg: Teaching and Learning Centres), government support to promote good teaching and learning, and increased levels of research on teaching (Alexander and Bajada, 2008). In many cases, universities have developed quality assurance and academic standards assessment practices as a strategic tool to shape effective teaching and learning processes (James, 2003), as well as improving retention rates. However, it is still considered that good teaching does not receive sufficient credit compared to research in most university promotion processes (Marginson, 2007); although compulsory higher education teaching training is not seen as an effective solution to improving the quality of university teaching and learning (Trowler and Bamber, 2005).

## **THE PROPERTY EDUCATION CONTEXT IN AUSTRALIA**

Given this focus on improving the quality of the teaching and learning experience in Australian universities and the increased focus by governments on students acquiring skills needed by industry (Thomas and Busby, 2003), the various universities offering property programs have responded positively in this debate to improve the quality and relevance of the property education experience in Australia in recent years. Often this has been in a context of students having poor university preparation, low university admission scores, university pressures to meet enrolment quotas and retention targets, and universities implementing more generic degree structures. Similarly, it has seen an ageing property academic staff profile, with an academic career not being seen as

attractive to many younger academics due to lack of job security, higher workloads and non-competitive salaries with property industry colleagues (Newell, 2007).

In this context of improving the quality of the teaching and learning experience, property programs in Australia have addressed the key strategic aspects of course content and structure, course delivery and assessment procedures to improve the student learning experience to boost retention, progress and completion rates. Other than the traditional face-to-face delivery procedure, this has seen the development of a range of teaching and learning strategies including flexible learning, blended learning and encouraging life-long learning to enhance the property student's learning environment and increase student engagement and effective communication. On-line learning has been a key ingredient in supporting this learning environment for property students, involving use of the internet, on-line journals and reports, as well as web-based technologies for e-learning (eg: Blackboard, podcasting) and virtual learning for both full-time and correspondence property students (Cornish et al., 2009). This has seen a change of focus to student learning instead of staff delivery for these property programs.

The industry relevance of these university property programs have been further enhanced by the use of guest lecturers, site visits and work experience for property students. This has seen the property industry more actively involved with these property programs in recent years (Blake and Susilawati, 2009; Newell, 2007; Newell and Eves, 2000); particularly with the property industry's expectation of more work-ready property graduates (Baxter, 2007). In particular, quality teaching standards and effective course delivery are key ingredients in the regular accreditation processes by the API and RICS for the Australian property programs.

With the RICS (2006) recommending a greater emphasis on teaching quality in property programs, recent years have seen an increased emphasis on assessing the student perspective of the property education experience in Australian universities. This includes their views on their property career preparation (eg: Blake and Susilawati, 2009; Everist et al., 2005; Page, 2008) and the effectiveness of new "blended learning" teaching strategies (Cornish et al., 2009). In particular, Newell (2003) assessed student perceptions of the quality of property education in Australia over 1994-2001. The major findings were higher levels of overall satisfaction than with the quality of the teaching, with property programs typically perceived to be having lower levels of teaching quality and overall satisfaction to that seen in the property-related areas of accounting, construction, business, economics, law and planning. Given the significant recent developments in property education in recent years, the focus of this paper is to assess the student perceptions of the quality of property education in Australia over the 16-year timeframe of 1994-2009; in particular, to assess whether the students' perceptions of the standard and quality of

property education has improved in recent years and how the quality of property education benchmarked with the other property-related disciplines.

## **GRADUATE CAREERS AUSTRALIA CEQ SURVEYS**

Graduate Careers Australia (GCA) (previously Graduate Careers Council of Australia) is the leading authority on the supply of and demand for new graduates in Australia ([www.graduatecareers.com.au](http://www.graduatecareers.com.au)). With over 35 years experience, the GCA is the peak body concerning new graduates, with representation from employers, universities and government. The GCA conducts an annual Australian graduate survey, comprising the Graduate Destination Survey (GDS) and Course Experience Questionnaire (CEQ) (GCA, 2009).

The CEQ has been conducted annually since 1993; the purpose being to assess the graduates' perceptions of the quality of their university education experience, including teaching and overall satisfaction. The CEQ is administered to graduates from all Australian universities, with 2009 seeing 158,733 graduates surveyed and a national response rate of 61.3%. The CEQ is conducted by each university in Australia, with graduating students surveyed approximately four months after completing their studies. Typically, this is April each year, with data collection finalized by September. The GCA receives this CEQ information from each university and prepares a consolidated national "Graduate Destination" report by February. For example, the GCA CEQ 2010 represents the views of those students finishing the requirements for their degree in 2009; with the final national report available in February 2011. Results are provided at a national and university level across approximately 40 fields of study and for over 80 discipline areas. Property degrees are classified under the "valuation and real estate" discipline area.

To reinforce the validity of the CGA's CEQ survey, it has seen over 20 years of international survey development and research, with continual refinement (Ramsden, 1991). The scope and comprehensiveness of the GCA CEQ procedure sees it as unique to Australia; particularly compared to the equivalent US and UK procedures. It is the most researched higher education survey tool in Australia (eg: Barrie et al., 2005; Ginn and Ellis, 2007; Ginn et al., 2007), and has been shown to be validated across repeated administrations of the CEQ survey and different cohorts. This confirms the validity and usefulness of the CEQ as a reliable performance indicator of the students' perceived quality of the university education experience. The CEQ results are public domain, providing a macro-level overview of teaching quality and informing the various universities' teaching improvement initiatives. The CEQ scores for the three compulsory CEQ categories of good teaching, overall satisfaction and generic skills are also used in calculating the Learning and Teaching Performance Fund scores for each university to be factored into government funding of the various universities (Alexander and Bajada, 2008).

The CEQ procedure involves both compulsory and optional questions. The compulsory questions for all universities concern good teaching (6 questions), overall satisfaction (1 question) and generic skills (6 questions); see Table 1 for CEQ 2009 questions. Each question is scored on a 5-point Likert scale of 1 = “strongly disagree” to 5 = “strongly agree”. Optional questions are also available to be included by individual universities in the areas of appropriate workload (4 questions), appropriate assessment (3 questions), clear goals and standards (4 questions), learning resources (5 questions), student support (5 questions), intellectual motivation (4 questions), graduate qualities (6 questions) and learning community (5 questions); see Table 2. Not all optional questions are asked by the various universities; typically approximately 24 questions in total are asked. Two open-ended questions are also asked concerning “best aspects of the course” and “aspects most in need of improvement”; these open-ended questions not being analysed nationally and are only provided as feedback to specific universities.

**Table 1: GCA CEQ compulsory questions: 2009 CEQ survey**

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### **GOOD TEACHING**

- The staff put a lot of time into commenting on my work.
- The teaching staff normally gave me helpful feedback on how I was going.
- The teaching staff of this course motivated me to do my best work.
- My lecturers were extremely good at explaining things.
- The teaching staff work hard to make their subjects interesting.
- The staff made a real effort to understand difficulties I might be having with my work.

### **OVERALL SATISFACTION**

- Overall, I was satisfied with the quality of this course.

### **GENERIC SKILLS**

- The course helped me develop my ability to work as a team member.
  - The course sharpened my analytical skills.
  - The course developed my problem solving skills.
  - The course developed my skills in written communications.
  - As a result of my course, I feel confident about tackling unfamiliar problems.
  - My course helped me to develop the ability to plan my own work.
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Limitations of the CEQ survey procedure include the potential impact of low response rates by graduates in specific courses, as well as the potential downward skewing of the good teaching score based on a non-representative bad teaching and learning experience by the student, rather than a broader representation of the quality of the macro-level teaching experience. It can also be influenced by external or

organisational factors such as property staff turnover and course changes during their time at university.

**Table 2: Selection of GCA CEQ optional questions: 2009 CEQ survey**

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### **CLEAR GOALS AND STANDARDS**

- It was always easy to know the standard of work expected.
- I usually had a clear idea of where I was going and what was expected of me in this course.
- It was often hard to discover what was expected of me in this course.
- The staff made it clear right from the start what they expected from students.

### **GRADUATE QUALITIES**

- Course provided me with a broad overview of my field of knowledge.
- The course developed my confidence to investigate new ideas.
- University stimulated my enthusiasm for further learning.
- I learned to apply principles from this course to new situations.
- I consider what I learned valuable for my future.
- My university experience encouraged me to value perspectives other than my own.

### **INTELLECTUAL MOTIVATION**

- I found my studies intellectually stimulating.
  - I found the course motivating.
  - Overall, my university experience was worthwhile.
  - The course has stimulated my interest in the field of study.
- 

## **METHODOLOGY**

The two major CEQ categories of “good teaching” and “overall satisfaction” are presented and analysed in this paper. These two categories were considered to be the more important categories to assess, with the other categories being more generic and less important in the overall property education context in this paper. Also, these optional CEQ questions are not asked by all universities.

The seven “property” universities in Australia included in this paper were Curtin University of Technology, Queensland University of Technology, Royal Melbourne Institute of Technology, University of Queensland, University of South Australia, University of Technology Sydney and University of Western Sydney. Only undergraduate property degree programs were assessed. GCA CEQs were analysed for the 16-year survey timeframe of CEQ1994 – CEQ2009. Results for CEQ1994-CEQ2009 for each university were extracted from the GCA CEQ database. While other Australian universities offer property degrees (eg: Deakin University, Bond

University, University of Sunshine Coast, Central Queensland University, University of New South Wales), they were not included in this analysis as their CEQ results were not available for the full timeframe of CEQ1994-CEQ2009 or they concentrated on post-graduate property programs.

For the CEQ categories of “good teaching” and “overall satisfaction”, average results are presented annually for each property university, as well as national averages presented for property and the property-related discipline areas of accounting, building, business, economics, law and planning. Sufficient property graduates responded each year to ensure a reliable indicator of teaching quality and overall satisfaction for each of the seven property universities assessed. For example, in CEQ2009, 202 property degree graduates responded; comprising Curtin University (49), QUT (15), RMIT (6), UQ (14), USA (25), UTS (37) and UWS (56). Equivalent numbers responding in CEQ2009 in the property-related disciplines were accounting (5,798), building (333), business (6,327), economics (1,076), law (2,554) and planning (190), further reinforcing the reliability of the CEQ responses for these property-related disciplines. Average scores were calculated for each year over 1994-2009, as well as sub-period analyses done for 2007-2009 (3 years), 2005-2009 (5 years), 2000-2009 (10 years) and 1994-2009 (16 years) to assess changes in the students’ perceptions of the quality of property education in more recent years. Average scores and corresponding ranks are given for each property degree for these various timeframes. To ensure the objectivity and significance of the results, the least significant difference procedure is used to assess for significant differences at the 5% level. This is done to assess for significant differences in good teaching and overall satisfaction between the seven universities and the seven disciplines. This sees differences between the average scores for two universities (or disciplines) exceeding the critical least significant difference value resulting in statistically significant differences ( $P=5\%$ ) between those two universities (or disciplines) in the specified time period.

Whilst these property degree rankings are available, emphasis in this paper is placed on identifying the broad property education trends over this 16-year timeframe, rather than establishing property university league tables or the detailed testing of statistically significant differences between average scores each year. In particular, the key issue of whether students perceive the quality of property education has improved in recent years is assessed by examining the more recent CEQ results with those from a previous study of property CEQs over 1994-2001 (Newell, 2003).

## **“GOOD TEACHING” RESULTS**

Table 3 presents the average scores and corresponding ranks for the GCA CEQ good teaching results for the seven property universities over specific time periods. The equivalent national property result and those for the property-related disciplines of

accounting, building, business, economics, law and planning are also presented. This analysis over these time periods enables the assessment of the changing dynamics of the property graduates' perceptions of teaching quality in their respective property degree program.

**Table 3: Analysis of GCA CEQ “good teaching” results\***

University	Average good teaching score			
	1994-2009 (16 year)	2007-2009 (3 year)	2005-2009 (5 year)	2000-2009 (10 year)
Curtin	3.14 (2)	3.21 (3)	3.09 (5)	3.19 (3)
QUT	3.05 (4)	3.03 (6)	3.01 (6)	3.07 (5)
RMIT	2.97 (6)	2.92 (7)	2.95 (7)	2.97 (7)
UQ	3.16 (1)	3.31 (2)	3.31 (2)	3.28 (2)
USA	2.82 (7)	3.18 (5)	3.11 (4)	2.99 (6)
UTS	3.10 (3)	3.48 (1)	3.51 (1)	3.29 (1)
UWS	3.02 (5)	3.21 (3)	3.18 (3)	3.14 (4)
Least significant difference (P<5%) at university level**	0.15	0.27	0.21	0.18
National property average	3.03	3.20	3.17	3.12
Related disciplines				
Accounting	3.06	3.26	3.23	3.16
Building	3.12	3.23	3.25	3.22
Business	3.19	3.39	3.37	3.29
Economics	3.13	3.35	3.33	3.25
Law	3.13	3.33	3.30	3.26
Planning	3.20	3.39	3.37	3.32
Least significant difference (P<5%) at discipline level**	0.05	0.07	0.06	0.07

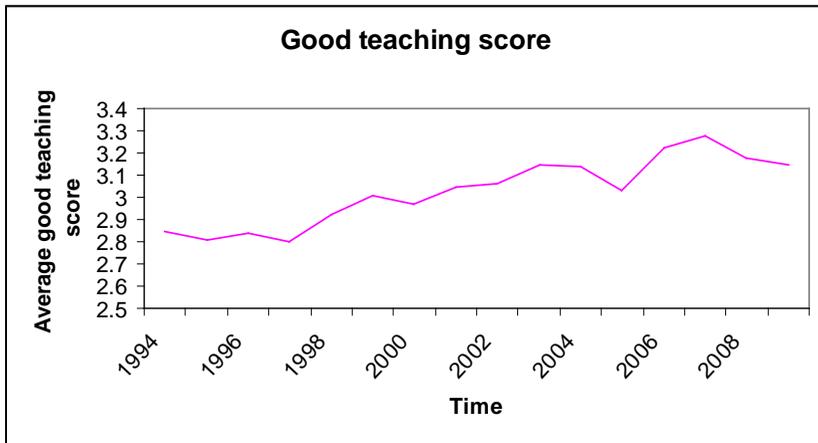
\*: average result is followed by rank in brackets within property degrees for each time period

\*\* : two mean scores for good teaching differing by more than the specified least significant difference are significantly different (P<5%)

In terms of good teaching, University of Queensland is seen to be the best performed over the 16-year period of 1994-2009, with UTS being the best performed over the more recent timeframes of 2007-09 (3 years), 2005-09 (5 years) and 2000-09 (10 years). Significant differences in these good teaching results for several universities

were evident ( $P < 5\%$ ) in each of the four timeframes analysed. To assess the general trend in improved teaching quality, Figure 1 presents the national property “good teaching” average scores annually over 1994-2009. The higher average national scores in more recent years (ie: 3.20 at 3 years, 3.17 at 5 years and 3.12 at 10 years) compared to the long-term 16-year average of 3.03 shows evidence of improved teaching quality over more recent years. However, at a national level, the quality of property teaching was consistently seen to be below the national averages for good teaching in the various property-related disciplines. Significant differences for good teaching results for several disciplines were evident ( $P < 5\%$ ) in each of the four timeframes analysed. This saw property significantly under-performing several other disciplines in each of these four timeframes.

**Figure 1: Profile of CEQ “good teaching” property program averages: 1994-2009**



To more critically assess whether there has been an improvement in the quality of property education, Table 4 benchmarks the good teaching results from Newell (2003) over 1994-2001 with those achieved in more recent years. The percentage improvement in these good teaching scores against this earlier base period of 1994-2001 is presented. Several universities have shown significant and consistent improvement in their good teaching scores in more recent years (eg: UTS, UWS, UQ and USA). At a national level, this average improvement in good teaching scores was also evident in more recent years; with this level of improvement for good teaching in property being consistent with that seen in the various property-related disciplines. The improvement in good teaching scores in more recent years for the property programs clearly reflects the property graduates’ support for the enhanced teaching

and learning environment strategies used in property programs in recent years to improve teaching effectiveness.

To further highlight the consistency of property programs delivering good teaching, Table 4 also presents the percentage of years each of the property programs out-performed the national property average for good teaching over a 5-year, 10-year and 16-year timeframe. Several property programs consistently out-performed the national property average (eg: UQ, Curtin) with several property programs also delivering this out-performance in good teaching more consistently in more recent years (eg: UQ, UTS, UWS).

**Table 4: Improvement in good teaching results**

University	1994-2009 (16 year)	2007-09 (3 year)	2005-09 (5 year)	2000-09 (10 year)	Percentage of years above national property average		
					1994-2009	2000-09	2005-09
Curtin	-1%	2%	-2%	1%	69%	60%	40%
QUT	-1%	-2%	-2%	0%	63%	50%	20%
RMIT	0%	-2%	-1%	0%	31%	10%	0%
UQ	6%	11%	11%	10%	81%	80%	100%
USA	10%	24%	21%	16%	6%	10%	20%
UTS	9%	23%	24%	16%	63%	80%	100%
UWS	4%	11%	10%	9%	50%	50%	60%
National property average	4%	10%	9%	7%			
Related disciplines							
Accounting	4%	11%	10%	7%			
Building	4%	7%	8%	7%			
Business	5%	11%	10%	8%			
Economics	5%	13%	12%	9%			
Law	4%	10%	9%	8%			
Planning	6%	12%	11%	10%			

## “OVERALL SATISFACTION” RESULTS

As well as good teaching, overall satisfaction provides a measure of the fuller property education experience; this includes elements such as the academic support services provided by the university and the flexible learning environment. Table 5 presents the average scores and corresponding ranks for the GCA CEQ overall satisfaction results for the seven property universities over the various time periods.

In terms of overall satisfaction, UWS is seen to be the best-performed over the 16-year period of 1994-2009, with UTS being the best performed over the more recent timeframes of 2007-09 (3 years), 2005-09 (5 years) and 2000-09 (10 years). Significant differences in these overall satisfaction results for several universities were evident ( $P < 5\%$ ) in each of the four timeframes analysed. Significant differences in these overall satisfaction results for several disciplines were also evident ( $P < 5\%$ ) in each of the four timeframes analysed. This again saw property significantly under-performing several other disciplines in each of these four timeframes.

**Table 5: Analysis of GCA CEQ “overall satisfaction” results\***

University	Average overall satisfaction score			
	1994-2009 (16 year)	2007-2009 (3 year)	2005-2009 (5 year)	2000-2009 (10 year)
Curtin	3.50 (4)	3.66 (3)	3.52 (4)	3.51 (4)
QUT	3.48 (5)	3.32 (6)	3.13 (7)	3.39 (7)
RMIT	3.44 (6)	3.31 (7)	3.38 (6)	3.40 (6)
UQ	3.60 (3)	3.68 (2)	3.68 (3)	3.67 (3)
USA	3.38 (7)	3.53 (5)	3.47 (5)	3.43 (5)
UTS	3.67 (2)	3.88 (1)	3.99 (1)	3.91 (1)
UWS	3.73 (1)	3.63 (4)	3.74 (2)	3.73 (2)
Least significant difference ( $P < 5\%$ ) at university level**	0.19	0.40	0.31	0.22
National property average	3.54	3.60	3.57	3.59
Related disciplines				
Accounting	3.69	3.67	3.68	3.71
Building	3.66	3.62	3.69	3.73
Business	3.72	3.76	3.77	3.76
Economics	3.67	3.74	3.75	3.72
Law	3.75	3.84	3.84	3.83
Planning	3.51	3.65	3.67	3.63
Least significant difference ( $P < 5\%$ ) at discipline level**	0.06	0.07	0.07	0.07

\*: average result is followed by rank in brackets within property degrees for each time period

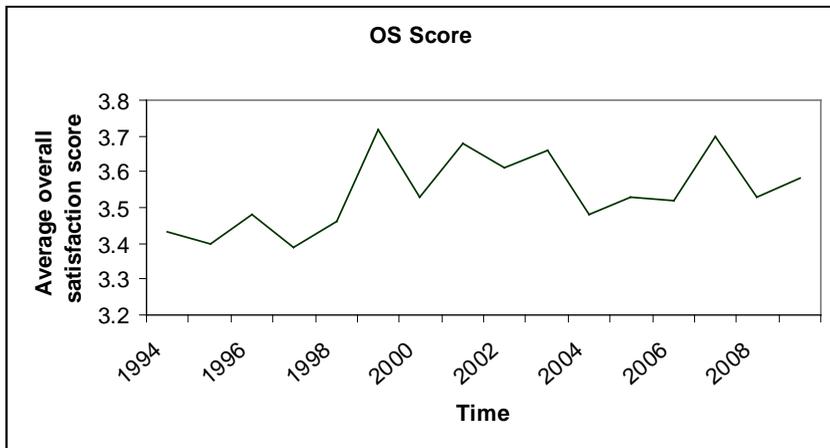
\*\* : two mean scores for overall satisfaction differing by more than the specified least significant difference are significantly different ( $P < 5\%$ )

Property students rated their overall satisfaction higher than the good teaching results; this being seen consistently across all universities and for all time periods. This is likely to reflect the appreciation of the property career prospects now open to them as graduates entering the property industry. The link between good teaching and overall satisfaction is also evident in the significant correlation ( $r=0.64$ ) between these two factors over this 16-year period.

In terms of demonstrating improved overall satisfaction, Figure 2 presents the national property “overall satisfaction” average scores annually over 1994-2009. The marginally higher national scores in more recent years compared to the long-term 16-year average of 3.54 shows some small degree of evidence of improved overall satisfaction in more recent years. However, the extent of this improvement was not as significant as that seen for good teaching. At a national level, the level of overall satisfaction was generally below the level seen in the national property-related disciplines; however, the extent of this difference was less than the differences seen for good teaching.

**Figure 2: Profile of CEQ “overall satisfaction” property program averages: 1994-2009**

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To more fully assess the top end of this overall satisfaction analysis, Table 6 presents the percentage of property students satisfied with the overall property degree experience; comprising the percentage of those “satisfied” and “highly satisfied”. UTS clearly dominates this top-end satisfaction analysis, with UQ and UWS performing consistently well across all timeframes.

**Table 6: Percentage of students satisfied with overall course\***

University	1994-2009	2007-09	2005-09	2000-09	Percentage of years above national property average		
	(16 year)	(3 year)	(5 year)	(10 year)	1994-2009	2000-09	2005-09
Curtin	61.0% (4)	66.7% (3)	60.0% (4)	59.0% (4)	42%	40%	40%
QUT	55.7% (5)	51.0% (6)	43.8% (7)	55.8% (5)	33%	40%	20%
RMIT	54.4% (6)	47.7% (7)	51.4% (6)	53.0% (6)	25%	20%	20%
UQ	67.8% (2)	71.0% (2)	68.2% (2)	68.9% (2)	75%	80%	100%
USA	53.3% (7)	57.3% (5)	53.8% (5)	53.0% (6)	0%	0%	0%
UTS	74.8% (1)	76.3% (1)	80.8% (1)	78.7% (1)	75%	80%	80%
UWS	65.4% (3)	65.7% (4)	67.6% (3)	65.6% (3)	75%	70%	80%
National property average	61.9%	62.7%	61.4%	62.1%			
Related disciplines							
Accounting	66.0%	65.3%	65.6%	66.1%			
Building	65.8%	63.3%	67.0%	67.1%			
Business	69.3%	69.0%	69.6%	69.2%			
Economics	66.8%	68.7%	68.6%	67.4%			
Law	70.3%	72.7%	72.4%	71.1%			
Planning	61.2%	63.7%	64.2%	62.7%			

\*: percentage followed by rank in brackets within property degrees for each time period

To more fully assess whether there has been improvement in overall satisfaction in recent years, Table 7 benchmarks the overall satisfaction results from Newell (2003) over 1994-2001 with those achieved in more recent years. The percentage improvement in these overall satisfaction scores against this earlier base period of 1994-2001 is presented. Whilst UTS has shown significant and consistent improvement in overall satisfaction in recent years, the improvement for most other property programs was marginal; this is also reflected in the marginal improvement in

the national property average. As such, the levels of improvement in overall satisfaction in recent years were less than that seen for the improvement in good teaching. This partly reflects the lower base level that good teaching comes off, compared to the consistently higher levels of overall satisfaction seen for all timeframes. The level of improvement for property programs out-performed several of the property-related disciplines, including accounting, building and economics; with most improvement in satisfaction evident in the planning programs.

**Table 7: Improvement in overall satisfaction results**

University	1994-2009	2007-09	2005-09	2000-09	Percentage of years above national property average		
	(16 year)	(3 year)	(5 year)	(10 year)	1994-2009	2000-09	2005-09
Curtin	0%	5%	1%	0%	50%	40%	40%
QUT	-4%	-9%	-14%	-7%	50%	30%	20%
RMIT	-3%	-6%	-4%	-4%	31%	20%	20%
UQ	2%	5%	5%	4%	63%	70%	80%
USA	2%	6%	5%	3%	13%	10%	0%
UTS	9%	15%	19%	16%	63%	80%	80%
UWS	1%	-2%	1%	1%	88%	90%	80%
National property average	1%	3%	2%	2%			
Related disciplines							
Accounting	0%	0%	0%	1%			
Building	1%	0%	2%	3%			
Business	1%	2%	2%	2%			
Economics	2%	4%	4%	3%			
Law	2%	5%	5%	5%			
Planning	5%	9%	10%	8%			

To further highlight the consistency of property programs having high levels of satisfaction, Table 7 also presents the percentage of years each of the property programs out-performed the national property average for overall satisfaction over a 5-year, 10-year and 16-year timeframe. UWS consistently out-performed the national property average over all timeframes. Improved out-performance against this benchmark in more recent years is evident for UTS and UQ.

## ADDED VALUE OF PROPERTY EDUCATION

To reinforce the relationship between good teaching and overall satisfaction in the property programs, the overall satisfaction: good teaching ratio (or “added value” ratio) was determined. This ratio captures the significance of the broader property education experience beyond just the teaching dimension<sup>1</sup>. Ratios above 1.0 reflect added value, with Table 8 presenting this added value analysis. All property programs were seen to deliver added value over the various timeframes. The highest level of added value was delivered by UWS over 1994-2009, as well as in most other timeframes. The national property added value averages have not increased in recent years, reflecting the more significant increases in good teaching compared to the lesser increases in overall satisfaction in recent years. Importantly, compared to the other property-related disciplines, property is generally seen to deliver the most added value over the various timeframes.

**Table 8: “Overall satisfaction: good teaching” added-value ratio analysis\***

<b>University</b>	<b>1994-2009 (16 year)</b>	<b>2007-2009 (3 year)</b>	<b>2005-2009 (5 year)</b>	<b>2000-2009 (10 year)</b>
Curtin	1.11 (7)	1.14 (1)	1.14 (3)	1.10 (6)
QUT	1.14 (5)	1.10 (7)	1.04 (7)	1.10 (6)
RMIT	1.16 (4)	1.13 (2)	1.15 (2)	1.14 (4)
UQ	1.14 (5)	1.11 (4)	1.11 (6)	1.12 (5)
USA	1.20 (2)	1.11 (4)	1.12 (5)	1.15 (3)
UTS	1.18 (3)	1.11 (4)	1.14 (3)	1.19 (1)
UWS	1.24 (1)	1.13 (2)	1.18 (1)	1.19 (1)
National property average	1.17	1.13	1.13	1.15
Related disciplines				
Accounting	1.21	1.13	1.14	1.17
Building	1.17	1.12	1.14	1.16
Business	1.17	1.11	1.12	1.14
Economics	1.17	1.12	1.13	1.14
Law	1.20	1.15	1.16	1.17
Planning	1.10	1.08	1.09	1.09

\*: average result is followed by rank in brackets within property degrees for each time period

<sup>1</sup> Care needs to be taken when interpreting this “added value” ratio; particularly where the teaching score is low. This measure is still considered by the authors to provide a meaningful measure of the added value of the students’ property education experience; particularly highlighting the professional practice dimensions of the property degree programs.

## PROPERTY EDUCATION IMPLICATIONS

Much has been achieved in property education since Tom Whipple established the first property program in an Australian university and published about this emerging area of property education (Whipple, 1968, 1980). This has subsequently seen property programs established at over 13 Australian universities, reflecting the stature of property at a local, national and global level. This has been further reinforced by strong linkages between the Australian property universities and the various property industry accreditation organisations, including the API and RICS. Evaluation of student satisfaction with their property programs is a key ingredient in these API and RICS accreditation processes.

This paper has analysed the GCA CEQ results for student perceptions concerning good teaching and overall satisfaction for the seven property universities in Australia over 1994-2009. Key results include:

- Improved quality of teaching has been evident in property programs in recent years
- UQ and UTS had the highest ratings for good teaching
- Quality of teaching in property programs is below that seen in the property-related disciplines
- High levels of overall satisfaction have been evident in property programs in recent years
- UWS and UTS had the highest ratings for overall satisfaction
- Overall satisfaction with property programs consistently rated more highly than good teaching
- There is a significant correlation ( $r=0.64$ ) between good teaching and overall satisfaction
- Teaching quality has improved at a faster rate than overall satisfaction in recent years
- Property programs have delivered consistently high levels of added value; typically at higher levels than seen for the property-related disciplines.

Specifically, for the Australian property programs, these improved CEQ results for good teaching and overall satisfaction reflect the many important initiatives in recent

years in improved course content and structure, course delivery and assessment in these property programs. This has resulted in an enhanced learning experience for property students via strategies such as flexible learning, blended learning and the effective use of on-line learning; as well as programs focused on meeting the students' property career expectations. The resulting improvement in the quality of property education is clearly evident, as students are prepared for a diverse range of careers in the property industry. With an increased government focus on improving the quality of the higher education experience for students in Australia, this is expected to see further enhancements in the stature and quality of property education in Australia.

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