Gender equity in the professoriate: A cohort study of new women professors in Australia

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According to statistics and trend data, women continue to be substantially under- represented in the Australian professoriate, and growth in their representation has been slow despite the plethora of equity programs. While not disputing these facts, we propose that examining gender equity by cohort provides a complementary perspective on the status of gender equity in the professoriate. Based on over 500 survey responses, we detected substantial similarities between women and men who were appointed as professors or associate professors between 2005 and 2008. There were similar proportions of women and men appointed via external or internal processes or by invitation. Additionally, similar proportions of women and men professors expressed a marked preference for research over teaching. Furthermore, there were similar distributions between the genders in the age of appointment to the professoriate. However, a notable gender difference was that women were appointed to the professoriate on average 1.9 years later than mens. This later appointment provides one reason for the lower representation of women compared to men in the professoriate. It also raises questions of the typical length of time that women and men remain in the (paid) professoriate and reasons why they might leave it. A further similarity between women and men in this cohort was their identification of motivation and circumstances as key factors in their career orientation. However, substantially more women identified motivation than circumstances and the situation was reversed for men. The open-ended survey responses also provided confirmation that affirmative action initiatives make a difference to women's careers.

Keywords: gender equity, women in the professoriate, Australian women professors

Introduction

Women are substantially under-represented in the professoriate in Australia and elsewhere. Hence, the achievement of gender equity is an important goal for universities. Gender equity refers to "A social order in which women and men share the same opportunities and the same constraints on full participation in both the economic and the domestic realm" (Bailyn, 2006). The issue of gender equity in the professoriate is not an issue for women alone. Having adequate representation of women and men in the professoriate contributes to structural diversity. Diversity is beneficial because differences among group members enhance collaboration, generation of ideas, knowledge and skills which can improve problem solving and work outcomes (Cummings, 2004; Ely & Thomas, 2001).

Typically, statistics on the proportion of women and men in the professoriate and trend data are used as indicators of gender equity. However, because the achievement of gender equity in the professoriate depends primarily on the entry of women academics to the professoriate, "new women professors" (NWPs) are the focus of our paper. Here, "new professors" refers to academics who were promoted or appointed to Associate or full Professor in Australian universities between 2005 and 2008. The significance of these dates is discussed shortly.

Following a description of the higher education context in Australia and an overview of the statistics and trend data on gender equity, we report on gender equity within a cohort of new professors through an examination of the proportion of women in this cohort, the profiles of these women, and the relationship between equity initiatives and the success of these new women professors. The paper concludes with a commentary on gender equity and directions for future research.

Background

Women in the Professoriate

Worldwide, only a small number of women achieve senior roles in academia (Boreham, Western, Baxter, Dever, & Laffan, 2008; Brouns & Addis, 2008; Gardiner, Tiggemann, Kearns, & Marshall, 2007; Perna, 2005; van Anders, 2004; White, 2004; Winchester, Lorenzo, Browning, & Chesterland, 2006). Internationally, women constitute less than 20% of the professoriate, with figures of 9% in the UK, 16% in the USA, and 18% in Finland (O'Connor, 2000). Similarly, in Australia, women have typically held less than 20% of senior positions in universities (Burton, 1997; Carrington & Pratt, 2003). Carrington and Pratt report that women are concentrated at the bottom of the academic hierarchy with the proportion of women dropping at each higher academic level in 2002 (Table 1). However, there is an overall upward trend in the representation of women in the professoriate with the proportion of women above senior lecturer increasing substantially in the decade between 1992 and 2002 (Table 2). A further upward trend is the proportion of women at Levels D and E in Australian universities. Winchester et al. (2006) reported that the proportion of women at Level D increased from 18% in 2000 to 24% in 2004 and at Level E from 13% to 16% in the same time periods. However, despite these increases women are still substantially under-represented in the professoriate in Australia.

Table 1: Proportion of female academics in 2002 by levels

	Level A	Level B	Level C	Level D and E
2002	54.6%	47%	34.2%	19.4%

Table 2: The Upward Trend of Women in the Professoriate

Year	Position	Percentage of Female Senior Academics
2006	Level D and above	23.1%
2002	Levels D & E	19.4%
2000	Levels D & E	16%
1996	Above Senior Lecturer	13%
1994	Above Senior Lecturer	11.6%
1992	Above Senior Lecturer	10.1

(Data Sources: Burton, 1997; Carrington & Pratt, 2003; Queensland University of Technology, 2007; White, 2003)

The under-representation of women in the professoriate in Australia and elsewhere is not due to low numbers of women completing degrees or entering academe (van Anders, 2004; White, 2001). For example, in Australia, participation rates for women at undergraduate levels in many disciplines is over 50% and women now make up over half of lecturing staff in universities (White, 2001).

Equal Employment Opportunities in Australia

Due to the *Equal Opportunity for Women in the Workplace Act* (EOWA, n.d.), universities are required to promote the employment of women based on merit, to eliminate discrimination and to provide equal opportunity for women in relation to employment matters. Within the sector, the Second Action Plan for Women Employed in Australian Universities 2006-2010 (Australian Vice-Chancellors' Committee, 2006) recognises the challenges faced by women academics in progressing to senior levels. Priority goals of the Action Plan include improving the representation of women in senior roles by encouraging equity initiatives in critical areas, identifying the impact of the research quality assessment on women in research, and identifying barriers to participation and leadership for women.

The Research Context in Australian Universities

The focus on the assessment of research quality in Australian universities was manifest initially with the proposal of the Research Quality Framework (RQF) in 2006 and subsequently with its replacement, the Excellence in Research for Australia (ERA) scheme proposed in 2008. It is unclear how this changing context of research quality assessment will impact on the careers of high performing and talented women in academia and the proportion of women in the professoriate. Elsewhere, when research quality assessments have been undertaken, the effect on academic careers has been significant. For example, in the UK, the impact of the Research Assessment Exercise on the labour market has been far reaching: "academe temporarily becomes a giant intellectual meat-market as higher-education institutions vie with each other to buy in staff with impressive CVs" (Jamrozik,

Weller, & Heller, 2004, p. 553). Hence, there is potential for substantial volatility in the professoriate with the advent of research quality assessment.

Research Design

This investigation of a cohort of new women professors draws on data collected for a larger study of the achievements and aspirations of new women professors (Diezmann & Grieshaber, 2009). The selected period for the larger study was from 2005 to 2008 which corresponded to the planning period for the research quality assessment. The research questions for this cohort study were:

- 1. What proportion of women academics was appointed to the professoriate between 2005 and 2008?
- 2. What were the profiles of new women professors compared to their male counterparts?
- 3. What impact did equity initiatives have on women's appointment to the professoriate?

These research questions were investigated through a survey that included closed and open-ended responses. The survey was a modified version of a paper-based survey by Ward (2000) in which she investigated women professors in Australian universities. The modifications to items enabled the survey to be administered electronically and included an invitation to women professors to participate in follow-up focus groups. Data from these groups is reported elsewhere (Diezmann & Grieshaber, 2009). Selected items from this survey were used to investigate each of the research questions. The quantitative data from the survey were analysed using descriptive and inferential statistics. The qualitative data from the survey responses were analysed thematically (Creswell, 2008) using pattern matching and explanation building (Patton, 2002).

A total of 520 new professors from 33 universities (see Appendix) undertook the survey following an invitation from the Human Resources departments of their universities. There were 240 (48.5%) men and 255 (51.5%) women and 25 non-responses for gender (Survey Question 2b). This sample provides adequate gender representation for comparative purposes because an almost equal number of male and female participants responded to the question on gender. In all reporting, the participants in the survey are identified as follows. The first letter indicates that they engaged in the Survey (S). (In the larger study, interview data was also collected.) The second letter indicates if they were Female (F) or Male (M). A three digit code was also assigned to survey respondents (n=520). Hence, the identifier S-F132 would indicate a survey respondent who was female and assigned the code of 132.

Results and Discussion

Each research question is addressed in turn.

1. What proportion of women was appointed to the professoriate between 2005 and 2008?

There were a total of 520 survey respondents. However not all participants responded to every question.

A total of 515 respondents indicated that they had been appointed to the professoriate. The current classifications of respondents (n= 515) revealed that approximately 50% of the new professors were new to the role of Associate Professor and approximately 44% were new to the role of Professor (Survey Question 1a). Approximately five percent of survey respondents indicated that they were Senior Staff or had another classification. The date respondents were appointed to this classification (Survey Question 1b) indicated a steady trend in appointments between 2005 and 2008. Although slightly more females than males were appointed at each level, the gender difference is not statistically significant (at the 0.05 level).

Despite the impending research quality assessment, between 2005 and 2008, there was considerable similarity in the various types of appointments to the professoriate of women and men (n=518) as shown on Table 3 (Survey Question 1c). These statistics suggest that women have not been disadvantaged irrespective of the type of appointment. Due to relatively low proportions of external appointments, the Australian academic labour market has not displayed the same level of volatility as the UK labour market (Jamrozik, et al., 2004). One reason for this lack of volatility may be that Australian universities are yet to experience the profile and funding implications that have followed each of the Research Assessment Exercises in the UK. A follow-up cohort study could be conducted for comparative purposes following the implementation and release of outcomes on ERA.

Type of Appointment	% Male	% Female	% Overall
Internal	55.6	55.5	57
External	21.8	22.8	25
Invitation	12.1	9.1	10
Other	10.5	12.6	-

2. What are the profiles of new women professors?

The profiles of NWPs are examined via their age, their career orientations and their interest in teaching and learning.

Age appointed to the professoriate

Survey participants (n=468) were aged from 26 to 66 years at appointment to the professoriate (Survey Question 27) with a mean age of 47.85 years. The distribution is reasonably symmetrical with a couple of outliers at the younger age limit. The highest proportion of appointees was in the two age groups of 41-50 years (45%) and 51-60 years (39%) (n=518); with less than 10% appointed before the age of 40 and over the age of 60 (Survey Question 2a). A gender comparison of age of appointment to the professoriate reveals a statistically significant difference at the 0.05 level between the mean age of appointment of males and females. On average, female professors were appointed 1.9 years after male professors (Figure 1). The mean ages for males and females respectively were 46.48 years and 48.33 years.

Thus, on average females are appointed to the professoriate nearly two years later than males.

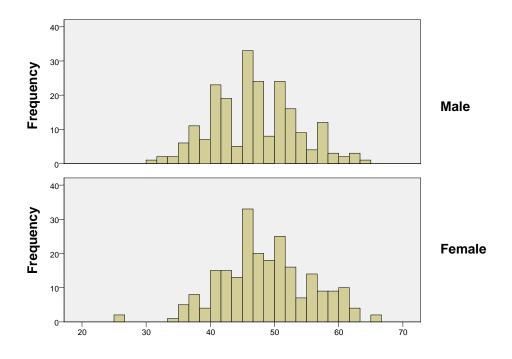


Figure 1: Age appointed as professor (female and male)

Career orientation

NWPs were oriented towards academia for two main reasons: motivation and circumstances.

Motivation was mentioned by 18 (62%) NWPs and 10 (45%) new men professors (NMPs) (Survey Question 9c). This motivation was expressed as: a desire to attend university, enjoyment in academic work, an orientation towards success (with success seen as incremental progression), and a competitive drive. The comments are consistent with Ward's (2003) study which found that many women entered the academy with no career plans and that promotion had been an ad hoc affair. Doherty and Manfredi (2005) also noted that women entered the academy with less specific career planning than men.

Circumstances also provided opportunities for both women and men to develop their careers. These included awarding of scholarships for university attendance and career moves of partners. Circumstances were mentioned by 11 (38%) NWPs and 12 (55%) new men professors (Survey Question 9c). There was considerable pragmatism in how circumstance determined an individual's field of study:

A teaching studentship was the only way I could go to university so education became my field. (S-F308)

Interest in research and teaching

Seventy percent of new professors indicated that that they were very heavily interested in research or they were interested in both but leaning towards research

(Survey Question 33) (n=508). Of note is the large difference between the proportion of staff interested in research and teaching, with 30% more respondents more heavily interested in research. The interest in research and teaching activities across gender is not statistically different (at the 0.05 level) (Figure 2). The preference for research over teaching is consistent with Ward's (2003) findings that "nearly 70% of respondents (n=180) experienced either a strong or moderate preference for research over teaching" (p. 89). Participants in Ward's study were Australian women who were full professors but not holding senior university positions (e.g., DVC, PVC, VC). Ward's findings and our findings concur that the majority of women professors do not prefer teaching to research. However, there is overwhelming evidence that female workloads are oriented toward teaching and pastoral care, and male workloads are directed towards research and profile building (Bagilhole & White, 2003; Bazely et al., 1996; Boreham et al., 2008; Foster, 2001). The marked preference for research over teaching by both females and males debunks the myth that female academics prefer teaching over research and creates the need for more equitable distribution of undergraduate teaching between females and males. It also suggests the need to consider how teaching can be promoted as a discipline of scholarly study.

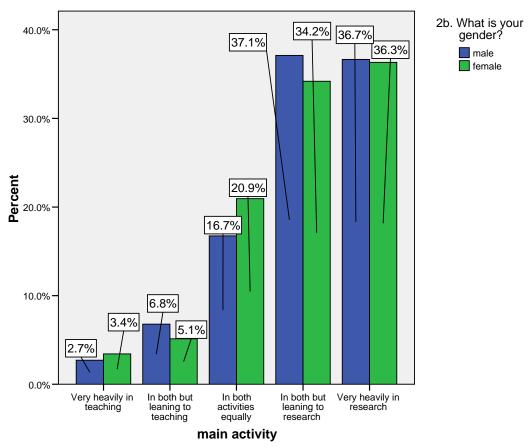


Figure 2: A comparison of female and male interest in research and teaching

3. What impact did equity initiatives have on women's appointment to the professoriate?

NWPs identified equal employment opportunities (EEO) as one of two strong catalysts for success, the other being mentoring, which is beyond the scope of this paper. Policies for Equal Employment Opportunities (EEO) have been in existence

for approximately 20 years in Australia (Winchester et al., 2006) and have achieved much in making workplaces more family friendly and responding to the circumstances of women academics. Each of the 33 Australian universities that participated in this study had some EEO programs in place. These programs included, for example, *Taking the Leadership Leap: A leadership training and coaching program* (University of Adelaide); *Women in Leadership/EQUIP* (Edith Cowan University); and the *Women in Research Program* and the *Women in Leadership Program* (QUT).

Female survey respondents noted that EEO policies have impacted positively on their work lives. Specifically, women have been provided with opportunities in the academy through affirmative action policies and practices which have resulted in access to educational, developmental and promotional opportunities and a means to redress inequitable behaviour.

I have benefitted personally from affirmative action schemes including a re-entry fellowship at post-doc level and promoting women fellowship to enhance promotion possibilities. (S-F296)

Before affirmative action policies for women in the 1980s, the real problem for me was actually getting to the shortlist and interview stage. Once affirmative actions informed HR processes, this became easier ... The more evidence is required for 'quality', the easier it has been for women in my situation to establish their achievements. (S-F486)

Openly (discriminatory) in my favour because the uni wanted to support and encourage women and I have had tremendous support as a women [sic]. (S-F070)

Because there is a requirement that women are represented on committees, this has meant that I obtained exposure to a wider range of admin jobs faster than many of my male colleagues and I believe this assisted in my promotion to Associate Professor. (S-F517)

Although women acknowledged that due to gender they received some opportunities, they want to be valued for their contributions.

I have more easily developed an international research profile, and have received international opportunities, as a result of being a female in a heavily male-dominated field — I am more visible and that helps. I have also been included in more high-level discussions/committees because of a need to round out gender numbers, and that has given me access to understanding higher-level decision-making. (S-F059)

There have been occasions where I have received positive discrimination because I am a woman. For example, I believe there have been occasions when I have been invited to participate on a committee or attend a university event to improve the gender balance. I think the organisers selected me for my qualities (not just simply

because I am a female), but there may have been males with similar qualities not given the opportunities that I have been given. (S-F345)

The impact of positive discrimination on females in male-dominated professions was noted to have mixed outcomes.

Being female in a male dominated faculty can be a blessing and a curse -i.e., the token female, but token female roles can provide experience and access to decision making forums not available to males at same level. (S-F390)

While affirmative action initiatives are important in supporting equity in employment, reports indicate that many women academics continue to feel stress that is associated with pressures of work and family (Gerdes, 2003) and some argue that academia still has a long way to go (Williams, 2001). Additionally, despite the success of EEO policies, affirmative action (i.e., positive discrimination) was far less prevalent than negative discrimination. Nearly 60% of NWPs (n=261) reported negative discrimination during their careers compared to 10% reporting positive discrimination.

Concluding Comments

This cohort study has provided a unique perspective on gender equity and revealed five points of interest including directions for future research.

First, the study revealed a major milestone in gender equity. That is, there was no statistical difference between the number of women and men appointed to the professoriate between 2005 and 2008. This achievement suggests that at least for women in contemporary times, the opportunities and constraints to reaching the professoriate have resulted in similar outcomes for men and women. This is not to suggest that the opportunities and constraints for women and men are necessarily the same. However, the finding of similar numbers of appointments in recent years suggests that statistics on the total proportions of women and men in the professoriate can "mask" the contemporary notion of equitable appointment. It should be noted that the data compared NWPs and NMPs across 33 universities (See Appendix) and differences could exist at the university or discipline levels. Thus, more fine-grained research is needed to investigate possible university or discipline differences. Such an investigation could use the same survey and focus questions within a university or discipline and compare those results to the overall Australian results.

Second, as a result of the preceding milestone, the issue of fairness emerges. Now that there is a 1:1 ratio of appointments of women and men appointed to the professoriate, is it appropriate to aim for a higher ratio in favour of women to redress the overall proportion of women in the professoriate? Kimura (1997) cautions that appointing women over better qualified men will lead to downgrading women in academia and a deterioration of collegial relations. Or, should we accept that the overall proportion of men and women in the professoriate will gradually equalize over time? At the current rate of improvement, there is a 49 year wait for equitable representation in the professoriate (Winchester et al., 2006). Thus, future research could canvass opinions of Australian academics on the option of positive discrimination to redress the gender balance in the professoriate more quickly.

Third, the insights gained through the cohort study suggest that it is necessary to investigate additional variables related to women's time in the professoriate. This study revealed that on average women were appointed to the professoriate two years later than males. Less time in the professoriate would be a contributing factor to the lower proportion of females than males in the professoriate if both men and women retired at the same age. If women retired earlier than men, the cumulative effect of a later appointment period coupled with an earlier retirement age would substantially reduce the average years that women are in the professoriate through an "age squeeze" and would skew the figures for female representation at any given time. Hence, in addition to age appointed to the professoriate, there is a need to study women's time in the professoriate and any reasons they leave the professoriate early.

Fourth, the similarity in NWPs' and NMPs' preference for research over teaching can be interpreted in two ways. At face value, it could indicate that women might be disadvantaged by any long term difference in the volume or type of teaching tasks assigned to them compared to men. The alternative interpretation is that it might be harder for women specialising in teaching to reach the professoriate. A comparison of the proportion of women in the professoriate who prefer research to those who prefer teaching would provide some insight into this issue.

Finally, this cohort study has provided some evidence of a causal relationship between Equal Employment Opportunity initiatives and equity programs put in place by various universities, and appointment to the professoriate. However, the degree of impact, particularly from university equity programs, requires further investigation. Future research could examine the type of equity programs that are in place in universities and the profiles of women those programs support. For example, family friendly programs would have potential benefit for women with dependent children but not for women whose children are adults.

The issue of gender equity in the professoriate is inherently complex. However, the reliance on statistics and trend data alone to monitor gender equity is too simplistic. This study has demonstrated that investigating a cohort using a survey yields rich data and offers potential avenues for future research. Given that technology provides the means to administer surveys and collate the results electronically, it is relatively inexpensive to undertake cohort investigations that can complement current equity data on women in the professoriate.

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Appendix: Participating Universities Oueensland

Bond University
Central Queensland University
Griffith University
James Cook University
Queensland University of Technology
University of Queensland
University of Southern Queensland
University of the Sunshine Coast

New South Wales

Charles Sturt University
Southern Cross University
The University of Sydney
The University of New South Wales
The University of Newcastle
The University of New England
University of Technology Sydney
University of Western Sydney

Victoria

Deakin University La Trobe University Swinburne University of Technology The University of Melbourne University of Ballarat Victoria University

Western Australia

Curtin University of Technology Edith Cowan University Murdoch University The University of Western Australia

South Australia

Flinders University
The University of Adelaide
University of South Australia

Tasmania

University of Tasmania

Australian Capital Territory Australian National University University of Canberra

National

Australian Catholic University