

## INTRODUCTION

The calibre of the staff in tertiary education providers (TEPs) has a major bearing on the learning experiences of students and on their motivation to keep learning. Tertiary educators play a vital role in contributing to New Zealand's emerging knowledge society by imparting their knowledge to the learners in the tertiary sector. The workforce represents the sector's most important resource.

The importance of the tertiary workforce was acknowledged in a 2005 report<sup>1</sup> by the Sector Working Group undertaking a strategic review of the tertiary education workforce, which noted that the quality of the tertiary education workforce will have a major impact on the tertiary sector's ability to achieve the goals of the Tertiary Education Strategy (TES). From a financial management perspective, personnel costs are more than 50 percent of the sector's total expenditure, further illustrating the importance of the tertiary workforce as a resource.

This section provides an overview of the tertiary education workforce by examining:

- trends in full-time equivalent (FTE) academic and non-academic staff numbers in tertiary education institutions (TEIs), and student to staff ratios over the period from 1997 to 2004<sup>2</sup>
- the tenure and gender and roles of staff in 2004, using data from the annual Ministry of Education surveys of TEIs and government-funded private training establishments (PTEs),<sup>3</sup> and
- an analysis of the degree-teaching and research workforce at universities, using data collected as part of the 2003 Performance-Based Research Fund (PBRF) Quality Evaluation.

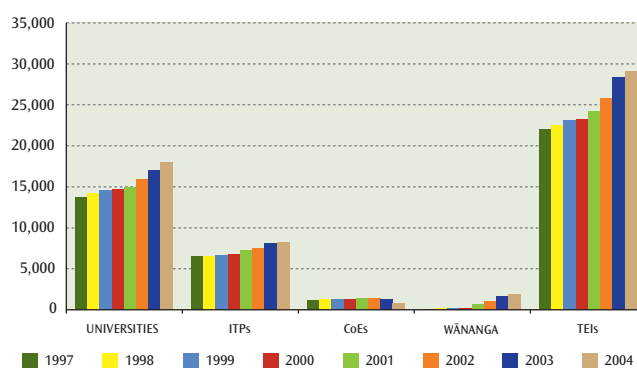
## FTE STAFFING 1997-2004

### All staff

TEIs reported that they employed 29,069 FTE staff over the course of 2004, compared with 28,338 in 2003. This represents a 2.6 percent increase between 2003 and 2004. In 1997, the total FTE staff employed in TEIs was 22,056.

The most significant change in 2004 occurred in the college of education (CoE) sub-sector, where Auckland College of Education merged with the University of Auckland on 1 September 2004.<sup>4</sup> As a result of the merger and resulting change of sub-sector status of Auckland College of Education staff from CoE to university staff, the total FTE staff employed at CoEs fell by 40 percent between 2003 and 2004, from 1,343 to 807.<sup>5</sup> Wānanga reported a significant increase of 14 percent in FTE staffing. This followed on from growth of 73 percent in the previous year. FTE staffing in universities increased by 6.0 percent, although part of this increase was due to the merger of Auckland College of Education with the University of Auckland.<sup>6</sup> Institutes of technology and polytechnics (ITPs) experienced relatively modest growth of 2.3 percent in FTE staff, compared with growth of 7.5 percent in 2003.

FIGURE 4.1: FTE STAFF EMPLOYED IN TEIs BY SUB-SECTOR 1997-2004



Note: Auckland College of Education staff are treated as university staff in 2004.

### Academic/tutorial staff

The TEI sector employed a total of 13,909 FTE academic/tutorial<sup>7</sup> staff during 2004, compared with 13,846 during 2003. This represents a 0.5 percent increase between 2003 and 2004, and an increase of 22 percent between 1997 and 2004. The growth in academic/tutorial staff has been the most pronounced since 2000, reflecting the growth in student numbers that has occurred over this time.

1 Tertiary Education Commission (2005), *Report on the Scope and the Methodology for the Strategic Review of the Tertiary Education Workforce*, Tertiary Education Commission, Wellington.

2 The Ministry of Education collects FTE academic and non-academic staff numbers in TEIs. FTE is the cumulative total of staff over a year, which accounts for staff working part of a year and varying levels of part-time.

3 The Ministry of Education collects snapshot data each year on staff employed in the tertiary education sector. The data includes public TEIs (ITPs, universities, CoEs and wānanga). It also includes other tertiary education providers in receipt of a Ministry of Education grant, PTEs receiving funding through the Student Component and/or with courses approved for student loans and allowances, and other PTEs registered with the New Zealand Qualifications Authority.

4 For the purposes of analysing annual trends, it is assumed that the merger took place on 1 January 2004. Therefore, all of the Auckland College of Education FTEs are included in the university sub-sector.

5 If Auckland College of Education FTE staff had been included in the CoE sub-sector, the FTE staff would have increased by 2.4 percent between 2003 and 2004.

6 Excluding the FTE staff from Auckland College of Education, university FTE staffing would have increased by 2.6 percent between 2003 and 2004.

7 Defined as the cumulative total for the year of teaching staff engaged in delivery of education and training for which income is derived from educational delivery. This includes all categories of employment related to this activity, eg part-time staff, short-term contractors and casual tutors.

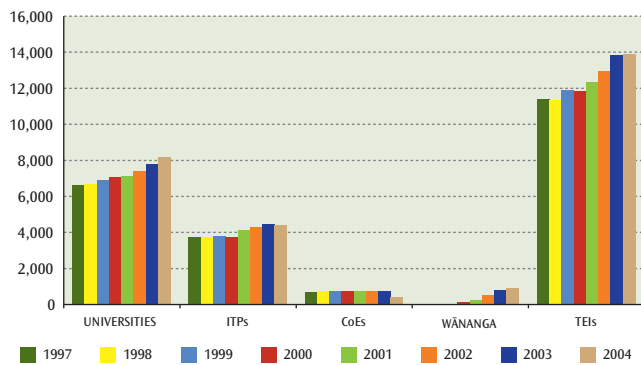


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Between 2003 and 2004, wānanga had the strongest growth in academic FTEs at 12 percent. Universities also experienced a rise in academic FTEs (5.1 percent), although the merger of the University of Auckland and Auckland College of Education contributed around half of this increase.<sup>8</sup> Academic FTEs in ITPs decreased slightly by 0.9 percent. This followed an increase of 3.3 percent in 2003, and was a reflection of a stabilisation in EFTS numbers at ITPs after strong growth in the preceding three years.

The large drop in academic FTEs of 42 percent between 2003 and 2004 at CoEs is a reflection of the merger of Auckland College of Education with the University of Auckland.

**FIGURE 4.2: FTE ACADEMIC STAFF EMPLOYED IN TEIs BY SUB-SECTOR 1997-2004**



Note: Auckland College of Education is included in university data in 2004.

### EFTS to academic FTE ratio

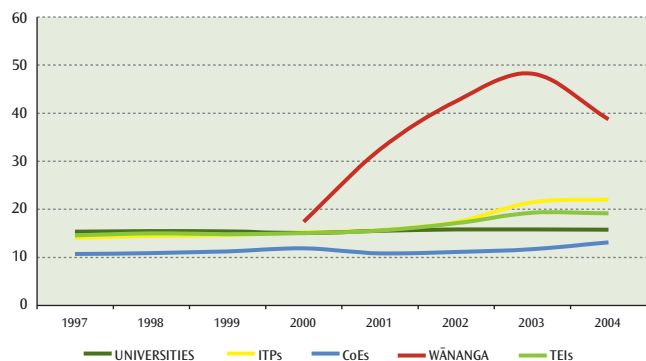
The student to academic staff ratio provides an indication of average class size. It is only a broad indicator of efficiency and does not take into account differences in learning support needs, qualifications or delivery methods. Therefore, comparisons between the ratios at individual institutions or sub-sectors must be made with caution. Variations will occur naturally because of the size of the institutions, enabling various economies of scale, the types of programmes offered, the types of students taught, delivery methods used and the duration of the programmes offered. The main value gained from analysing this ratio is to gain an understanding of what changes have occurred over time within a provider or sub-sector.

The EFTS to academic staff FTE ratio was 19.1 in 2004 for TEIs as a whole, compared with 19.3 in 2003 and 14.6 in 1997. This represents a decrease of 0.8 percent between 2003 and 2004, and an increase of 31 percent between 1997 and 2004.<sup>9</sup>

Between 2003 and 2004, wānanga reported the most significant movement in EFTS per academic staff FTE, with a decrease of 19 percent. A fall in EFTS combined with an increase in academic FTEs were the drivers of this decrease. The large increase in the EFTS per academic staff FTE reported by CoEs (12 percent) was due to the merger of Auckland College of Education with the University of Auckland.

The movements in the ratio of EFTS per academic staff FTE in the remaining sub-sectors were more modest. ITPs experienced a slight increase in EFTS per academic FTE of 2.6 percent, while universities experienced a small decrease of 0.5 percent.<sup>10</sup>

**FIGURE 4.3: EFTS PER ACADEMIC FTE IN TEIs BY SUB-SECTOR 1997-2004**



Note: Auckland College of Education is included in university data in 2004.

### Non-academic executive and support staff

The numbers of non-academic executive and support staff FTEs in TEIs have exhibited a faster growth rate than academic FTEs over time. Between 2003 and 2004, non-academic<sup>11</sup> FTEs increased by 4.6 percent, from 14,492 to 15,160. Between 1997 and 2004, non-academic FTEs increased by 42 percent.

Between 2003 and 2004, all sub-sectors, with the exception of CoEs, experienced growth in their non-academic FTEs. Non-academic FTEs increased in wānanga by 15 percent, universities

<sup>8</sup> Excluding Auckland College of Education academic FTEs, university *academic* FTEs increased by 2.7 percent between 2003 and 2004.

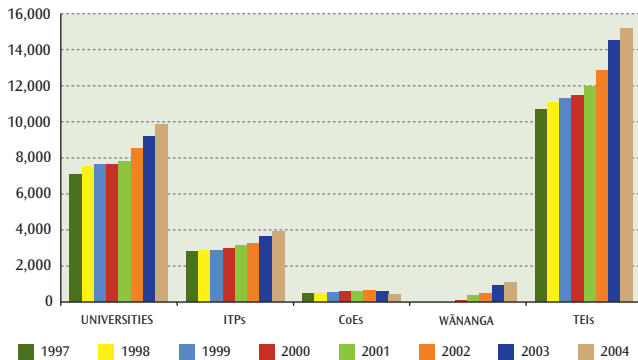
<sup>9</sup> However, the ratio of EFTS per FTE total staff increased at a much lower rate over this period. Between 1997 and 2004, EFTS per FTE total staff increased by 13 percent in TEIs.

<sup>10</sup> The small decrease for universities is largely a result of the merger of Auckland College of Education and the University of Auckland. If Auckland College of Education was excluded from the university data, then the EFTS per academic staff FTE ratio would likely have remained relatively constant.

<sup>11</sup> The residual of total staff FTEs not meeting the criteria for academic staff.

by 6.7 percent and ITPs by 6.1 percent. CoEs reported a decrease of 38 percent, although this was due to the impact of the merger of Auckland College of Education with the University of Auckland.

**FIGURE 4.4: FTE NON-ACADEMIC STAFF EMPLOYED IN TEIs BY SUB-SECTOR 1997-2004**



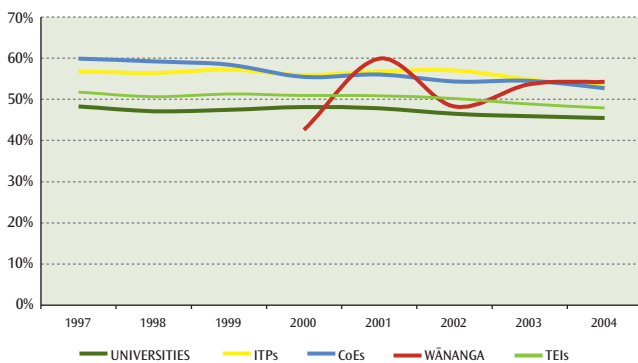
Note: Auckland College of Education is included in university data in 2004.

## The mix of academic and non-academic staff

The mix of academic and non-academic staff varies by sub-sector. On an FTE basis, universities have the lowest proportion of academic staff and wānanga the highest. In 2004, FTE academic staff were 45 percent of FTE total staff in universities. This compares with 53 percent in ITPs and CoEs, and 54 percent in wānanga.

Over time, the faster rate of growth in FTE non-academic staff has resulted in academic FTEs falling as a percentage of total FTEs. In 1997, FTE academic staff comprised 52 percent of FTE total staff in TEIs. By 2004, this had fallen to 48 percent.

**FIGURE 4.5: FTE ACADEMIC STAFF AS A PERCENTAGE OF FTE TOTAL STAFF 1997-2004**



Note: Auckland College of Education is included in university data in 2004.

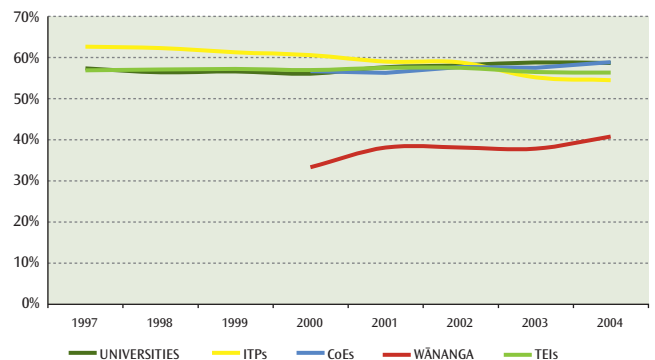
## Personnel costs

Personnel costs amounted to \$1.81 billion in 2004. This compared with \$1.67 billion in 2003 and \$1.5 billion in 2002. There was an increase of 8.3 percent in personnel expenditure between 2003 and 2004, and an increase of 60 percent between 1997 and 2004. This compares with an increase of 35 percent in personnel costs per FTE total staff between 1997 and 2004.

Personnel costs form the largest budget item in the TEI sector. As a percentage of total costs, personnel costs in TEIs have remained relatively constant at around 56 percent between 1997 and 2004.

At the sub-sector level, personnel costs as a proportion of total costs rose in wānanga and CoEs between 2003 and 2004. In 2004, personnel costs comprised 41 percent of total costs at wānanga, compared with 38 percent in 2003. In CoEs, personnel costs as a percentage of total costs were 59 percent in 2004, compared with 57 percent in 2003. Personnel costs remained constant at universities as a percentage of total costs (59 percent) and fell slightly in ITPs (from 55 percent in 2003 to 54 percent in 2004).

**FIGURE 4.6: PERSONNEL COSTS AS A PERCENTAGE OF TOTAL COSTS 1997-2004**



Note: Auckland College of Education is included in university data in 2004.

## GENDER, POSITIONS, FULL-TIME/PART-TIME

The following sections provide an analysis of the gender, full-time/part-time status, ethnic group and age of tertiary staff.<sup>12</sup>

### Tenure

In 2004, the majority of academic staff at TEIs were employed on a full-time basis, with 64 percent of staff in this category. The proportion of staff employed on a full-time basis increased in 2004, after declining for several years. At 70 percent of the total, the proportion of men employed on a full-time basis was significantly greater than the 59 percent for female staff. Wānanga

<sup>12</sup> This analysis is based on the 2004 headcount snapshot data and the 2001 Census. This 2004 snapshot data treats Auckland College of Education staff as CoE staff.



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(75 percent) had the highest proportion of staff who were employed on a full-time basis and ITPs (58 percent) the lowest.

Amongst executive and support staff, there was a higher proportion of staff employed on a full-time basis in nearly all groups of staff. In total, 66 percent of executive and support staff were employed on a full-time basis with 73 percent of male and 62 percent of female staff working full-time.

TABLE 4.1: TOTAL STAFF BY TENURE AND SUB-SECTOR 2004

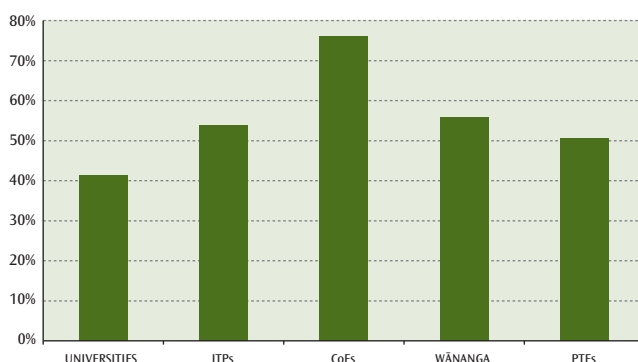
| Sub-sector   | Tenure    | Male | Female | Total |
|--------------|-----------|------|--------|-------|
| Universities | Full-time | 69%  | 57%    | 63%   |
|              | Part-time | 31%  | 43%    | 37%   |
| ITPs         | Full-time | 67%  | 52%    | 58%   |
|              | Part-time | 33%  | 48%    | 42%   |
| CoEs         | Full-time | 79%  | 65%    | 68%   |
|              | Part-time | 21%  | 35%    | 32%   |
| Wānanga      | Full-time | 79%  | 73%    | 75%   |
|              | Part-time | 21%  | 27%    | 25%   |
| PTEs         | Full-time | 72%  | 68%    | 70%   |
|              | Part-time | 28%  | 32%    | 30%   |

Note: Auckland College of Education is included in CoE data in 2004.

## Gender and status

Women accounted for 58 percent of the total staff at TEIs and 57 percent of staff at government-funded PTEs. For academic staff, however, men accounted for the majority of academic staff in TEIs at 52 percent of the total. The universities had the lowest proportion of women on their academic staff with 41 percent. In other sub-sectors, women accounted for 50 percent or more of the academic staff, with CoEs having the highest proportion at 76 percent.

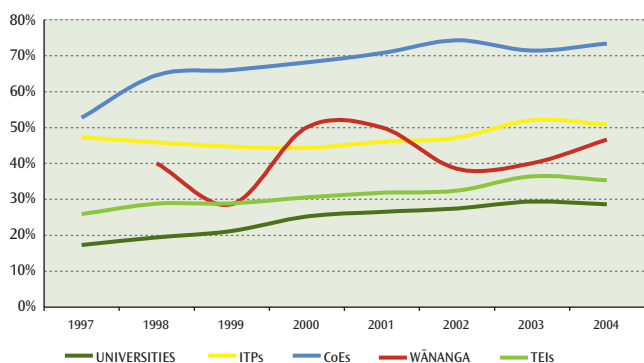
FIGURE 4.7: PERCENTAGE OF FEMALES AMONG ACADEMIC STAFF 2004



Note: Auckland College of Education is included in CoE data in 2004.

In 2004, women were under-represented among the *senior* academic positions<sup>13</sup> in the universities and wānanga. In the TEIs as a whole, women only accounted for 35 percent of the senior academic staff. Figure 4.8 illustrates the proportions of women in senior academic positions in the four TEI sub-sectors. In 2004, three of the four sub-sectors registered a decrease in the proportion of women in senior academic positions. This comes against a backdrop of a generally increasing proportion of women in these positions in the period between 1997 and 2004.

FIGURE 4.8: PERCENTAGE OF FEMALES AMONGST SENIOR ACADEMIC STAFF 1997-2004



Note: Auckland College of Education is included in CoE data in 2004.

## Ethnic group and age

Additional information on tertiary teaching staff can be drawn from the 2001 Census. In that Census, 13,491 individuals identified themselves as tertiary teaching professionals.

According to the 2001 Census, the majority of teaching staff (82 percent) were of European ethnicity, compared with 84 percent in the 1996 Census. In 2001, Māori, Pasifika and Asian ethnic groups represented 8.6 percent, 1.5 percent and 5.7 percent, respectively, of tertiary teaching professionals. In each case the proportion was significantly lower than the corresponding proportion in the student population.

At the time of the 2001 Census, tertiary teaching professionals were most commonly between 40 and 49 years of age (31 percent). Twenty-seven percent were aged between 50 and 59, 23 percent were aged between 30 and 39, and 11 percent were aged between 25 and 29. Census data shows that the gender balance was more even among younger teaching professionals, which may indicate a cohort effect, with larger groups of younger women now moving through the teaching profession.

<sup>13</sup> Senior academic positions include deans/heads of school, heads of department/faculty, principals and senior lecturers.

## THE PBRF-ELIGIBLE UNIVERSITY WORKFORCE

In 2003, the demographic and employment characteristics of PBRF-eligible staff were collected from participating TEOs as part of the PBRF quality evaluation. To be PBRF eligible, a staff member had to be on the academic staff and was expected to make a significant contribution to research activity and/or degree teaching at a TEO. For the purposes of this analysis, only the characteristics of PBRF-eligible staff in the universities are analysed.<sup>14</sup>

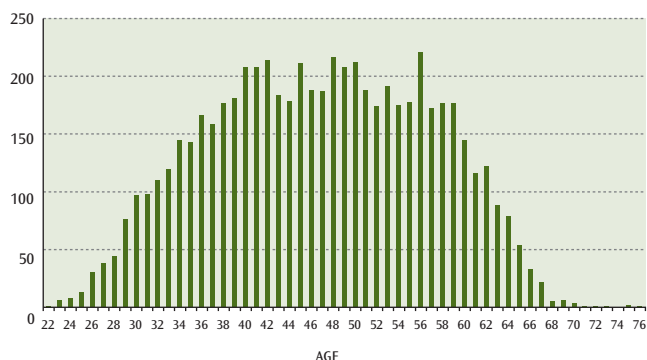
### Age of PBRF-eligible university staff

The average age of PBRF-eligible university staff in 2003 was 46.9 years.<sup>15</sup> The age of staff ranged from 22 to 76, with around 70 percent of staff aged between 39 and 60 on an FTE basis (see Figure 4.9).

The average age of 47.6 years for men was slightly higher than the average age of 45.2 for women. Professors had an average age of 54.9 years, followed by associate professors (52.3), senior lecturers (48.9) and lecturers (41.6).

University PBRF-eligible staff who identified themselves as belonging to the European ethnic group had an average age of 47.4 years. Staff in the remaining ethnic groups were younger on average, with Māori staff having an average age of 44.3 years, Pasifika staff 44.9 years and Asian staff 42.6 years.

FIGURE 4.9: FTE PBRF-ELIGIBLE UNIVERSITY STAFF BY AGE 2003

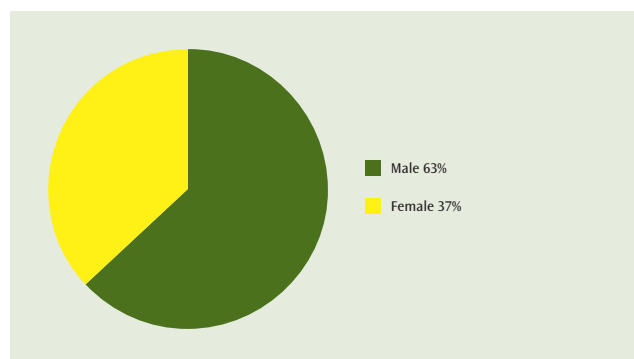


Source: Tertiary Education Commission

### Gender of PBRF-eligible university staff

On an FTE basis, the majority of PBRF-eligible university staff were male. Sixty-three percent of FTE staff were men and 37 percent were women.

FIGURE 4.10: PERCENTAGE OF FTE PBRF-ELIGIBLE UNIVERSITY STAFF BY GENDER 2003

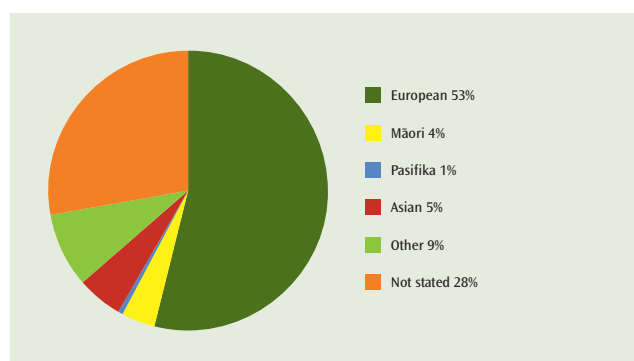


Source: Tertiary Education Commission

### Ethnicity of PBRF-eligible university staff

On an FTE basis, 53 percent of staff recorded that they belonged to the European ethnic group, 5 percent to the Asian ethnic group, 4 percent to the Māori ethnic group and 1 percent to the Pasifika ethnic group. However, a significant proportion of staff (28 percent) did not state their ethnic group.

FIGURE 4.11: PERCENTAGE OF FTE PBRF-ELIGIBLE UNIVERSITY STAFF BY ETHNIC GROUP 2003



Source: Tertiary Education Commission

### Position of PBRF-eligible university staff

In terms of position, senior lecturers were the largest group of PBRF-eligible staff at universities on an FTE basis. Staff in this category comprised 37 percent of the workforce. They were followed by lecturers (22 percent), associate professors (9 percent) and professors (8 percent).

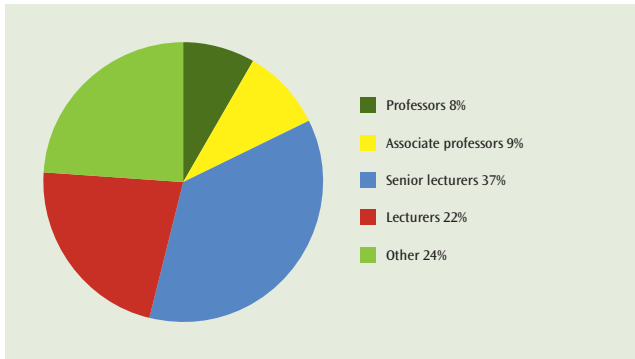
14 Not all ITPs, wānanga or PTEs participated in the quality evaluation so they are excluded from this analysis. As research activities take place mainly in the universities, their PBRF-eligible staff are the focus of this analysis.

15 Not all staff provided information about their age. About 3 percent of university PBRF-eligible staff did not provide their age.



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**FIGURE 4.12: PERCENTAGE OF FTE PBRF-ELIGIBLE UNIVERSITY STAFF BY POSITION 2003**



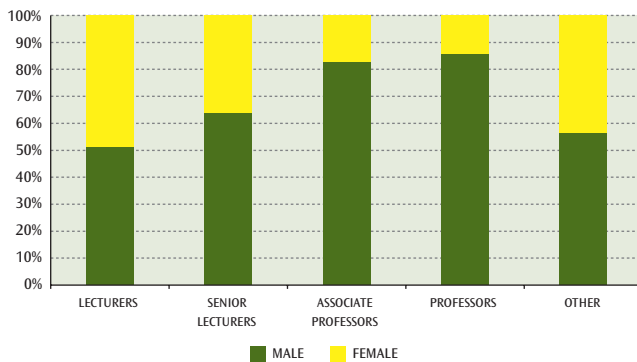
Note: 'Other' includes positions such as: tutors, visiting academics, research fellows and technicians.

Source: Tertiary Education Commission

### Gender and position of PBRF-eligible university staff

Disaggregating the position of staff by gender, Figure 4.13 shows that women had a lower level of representation in the more senior academic positions. On an FTE basis, women comprised 49 percent of PBRF-eligible staff at the lecturer level, 36 percent at the senior lecturer level, 17 percent at the associate professor level and 14 percent at the professor level.

**FIGURE 4.13: PERCENTAGE OF FTE PBRF-ELIGIBLE UNIVERSITY STAFF BY POSITION AND GENDER 2003**



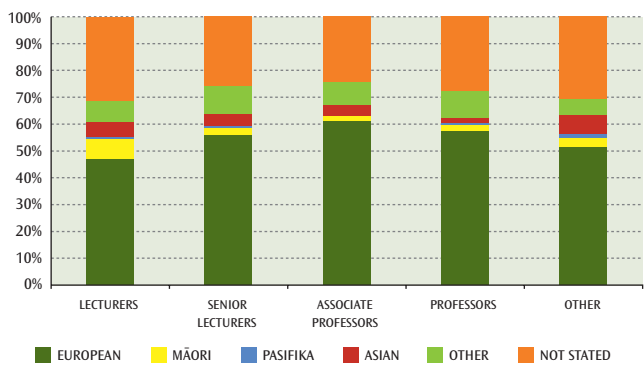
Note: 'Other' includes positions such as: tutors, visiting academics, research fellows and technicians.

Source: Tertiary Education Commission

### Ethnic group and position of PBRF-eligible university staff

Figure 4.14 below shows the distribution of PBRF-eligible staff in universities by position and ethnic group on an FTE basis. The data shows there is a wide variation in the representation of ethnic groups by position, with minority ethnic groups generally having lower representation in the more senior academic positions. Staff declaring a European ethnic group comprised the largest percentage of staff in all positions on an FTE basis, with a highest representation among associate professors (61 percent) and lowest among lecturers (47 percent). For Māori staff, the greatest representation was at the lecturer level, with 7.5 percent of staff belonging to this ethnic group on an FTE basis. The lowest representation of Māori staff was among associate professors, with 1.5 percent. The highest representation of Pasifika staff was in other positions, with 1.2 percent. There were no Pasifika staff who were associate professors. Asian staff had the highest representation of 7.2 percent among staff in other positions and a lowest of 1.9 percent among professors.

**FIGURE 4.14: PERCENTAGE OF FTE PBRF-ELIGIBLE UNIVERSITY STAFF BY POSITION AND ETHNIC GROUP 2003**



Note: 'Other' positions includes positions such as: tutors, visiting academics, research fellows and technicians.

Source: Tertiary Education Commission