

Attraction and Retention of Staff in Queensland Secondary Schools: Factors and Implications

Lindsay Greer

CQ University

Email: l.greer@cqu.edu.au

Delwar Akbar

CQ University

Email: d.akbar@cqu.edu.au

Abstract

Australian public policy has long focused on the quality of education as a means to develop the nation's economic and social progress. Secondary school education is a key phase in the education system, where most students form their analytical ability and decide on their future career direction. One of the serious problems facing secondary education systems is the attraction and retention of high quality teachers in specialised areas such as sciences, mathematics and technology. Hence, there is a need to develop innovative strategies to recruit educators to meet the current demand and for future generation. This paper aims to explore the factors for choosing teaching as a career. Relevant variables of a teaching career attraction were framed through an extensive literature review and then these were discussed with relevant stakeholders. A questionnaire was devised addressing these variables and a survey was conducted to Year-12, University Students and Secondary Teachers in Queensland. The paper concludes with some strategic guidelines to attracting and retaining the teachers at secondary level.

Keywords: Attraction and retention of teachers, teaching careers, Queensland secondary school

Introduction

According to the Australian Bureau of Statistics (ABS), there were 276,822 working teachers¹ in 2007. On average, teachers in the workforce have been teaching for 17 years, while school leaders have been teaching for 25 years. One in ten teachers has taught in a remote location (DEST, 2003). Moreover, one in five current teachers have resigned and then returned to teaching (McKenzie et al, 2008). Almost 32% of qualified teachers were employed in other fields, such as health and community

services, property and business services, retail, personal and other services, and government and defence (DEST, 2003).

Although the current picture shows that the national labour market in Australia for teachers is adequately balanced, most states report recruiting difficulties in a number of secondary teaching specialisation fields such as Sciences, Mathematics, Technology and Languages other than English (LOTE) and Special Education; some reported staff shortages in rural and remote locations (MCEETYA, 2005; Webster et al, 2005; Lyons et al, 2006; Education Workforce Initiatives Taskforce, 2007; McKenzie et al, 2008).

Research has shown that student's interest towards study science, mathematics and technology, for example, deteriorates from primary to secondary school, and the number of student enrollments in those subjects is declining over the past ten years (DEST, 2003; Lawrence and Palmer, 2003). Although enrollments in undergraduate science, mathematics and technology courses have remained relatively consistent, enrolments in science, mathematics, and technology education have fallen (Lawrence and Palmer, 2003), raising some concerns that Bachelor of Science (BSc) Graduates do not view teaching as a favourable career option. One of the reasons cited in the literature as a barrier to pursuing an education degree in Science, Mathematics and Technology is the extra year of study that must be completed in order to gain teacher certification and the higher education contribution scheme (HECS) debts incurred (DEST, 2003; Lawrence and Palmer, 2003; Lyons et al, 2006).

According to DEST (2003), there is international competition for trained science, mathematics and technology teachers resulting in high mobility of these course teachers to other countries such as the UK, Hong Kong, Canada, and USA.

Approximately 8,000 teachers are leaving Australia each year to work in other countries (The Australian, 2006).

Some of the more systemic challenges faced by rural and remote areas include: an ageing teacher workforce - by 2009, about 86,000 teachers will be aged over 55, and another 48,000 teachers will reach this age between 2010 and 2014 (ABS, 2003); competition for staff from other industry sectors and professions; current 'relatively horizontal' teacher salary scales – salary caps and limits to career progression; competitive salary rates – between Australian states/territories and pay scales in other industry sectors; cost of professional development - in terms of access, time, travel and expense.

Concern has been expressed about the number of secondary teachers teaching 'out-of-field'. The *Staff in Australia's Schools* study (McKenzie et al, 2008) specifically looked at four secondary subject areas that are experiencing teacher shortages: Mathematics, Physics, Chemistry and Information Technology (IT). In 2006, there were an estimated 400 unfilled vacancies for Mathematics teachers and 300 unfilled vacancies for Science teachers across Australia. In 2006, over 600 Special Needs teachers were required to fill the vacancies across Australia.

DEST (2003) has predicted overall national shortages of teachers up to 30,000 citing ageing teacher workforce and competition from other sector as key factors. MCEETYA (2003) report that teachers' retention would present a major challenge for education providers in the next decade and also suggests that education jurisdictions have a number of strategies in place to ultimately achieve the goal of attracting and retaining teachers.

This paper aims to explore the factors for choosing teaching as a career. Relevant variables of a teaching career attraction were framed through an extensive literature

review and then these were discussed with relevant stakeholders. A questionnaire was devised addressing these variables and a survey was conducted to Year-12, University Students and Secondary Teachers in Queensland.

The next section of the paper outlines the attraction and retention variables of teaching as a career based on a literature review. Section 3 describes the research methodology to explore these variables at a regional level (State of Queensland). This is followed by the analysis of the results and the main findings. The paper concludes with some strategic guidelines to attracting and retaining the teachers at secondary level.

Attraction and Retention Variables

Although beginning salaries for education graduates are competitive, salary scales quickly plateau, becoming less financially attractive the longer one remains in the profession. Typically, education graduate salaries increase by 55% over the first five years, whereas the majority of graduate salaries increase by 100% in the same time frame (DEST, 2003). Additionally, salaries for mature career change individuals do not recognise prior work and non-teaching experience.

Offering competitive pay packages seems to be an effective approach because teaching in one market segment is not the same as teaching in another as they require different skill and knowledge. Incentive payments were rarely applied due to entrenched values surrounding workplace norms and wage equivalence (Webster et al, 2005). Although problematic to identify high performing teachers it is possible to introduce incentives like performance loadings based on supervisor's recommendations rather than higher pay.

Billingsley (2004) identified that nearly half of the special education teachers left their position in the first five years and went on to highlight the importance of responsive

and supportive induction processes. Problems with teaching roles including role design, role ambiguity, role conflict and role overload were also identified. The importance of a positive and supportive school culture and the leader's role in creating such a culture was emphasised.

Altruistic variables for attracting and retaining teachers at secondary level teaching such as personal fulfillment, a desire to work with young people, personal enjoyment of the subject area, and making a difference are highlighted in the international literature; economic and career related variables such as salary, status of teaching and career advancement also attract attention (ACER, 2008; ASPA, 2002, 2006; DEST, 2007). However, factors of teacher remuneration and status may be more important variables for those who choose not to teach.

The compilation of attraction and retention variables of secondary level teaching careers devised were informed by a substantive review of education literature then further scrutinized by key education stakeholders and examined in the State of Queensland, Australia.

Methodology

The study is based on primary data collection through a questionnaire survey. The research adopted an in-sector focus on education providers located within Brisbane, Toowoomba, Rockhampton and Mackay regions. In addition the research formulated some innovative recruitment strategies based on the survey findings and lessons from other industry sectors within Australia and internationally.

The research participants were recruited from metropolitan, regional, rural and remote locations in Queensland. Quantitative data was collected from Year 12 students (n=239) and secondary teachers (including Heads of Departments and Principals)

(n=91) within schools via a paper-based survey instrument. University students (n=1243) were invited to participate in an online survey. Correlation matrix, factor analysis and weighted average technique had been used for classifying the factors and identifying the strength of the variables.

Findings and Analysis

For Year 12 student's career attributes and general career preferences were examined using Spearman Rank Order Correlation method and factor analysis to see if there were significant correlations between career choices and career attributes. There were two significant correlations being secondary teaching and the 'cost of training' as well as primary teaching and 'helping people/making a difference', which is negatively correlated (Table 1). For the university students, five career attributes are positively and significantly correlated with choosing a teaching career; job security, flexibility of working arrangements, level of salary/wage, helping people/making a difference and increased choice of career directions (Table 1).

Table 1 Correlation between teaching career and career attributes

Group	Marked correlations are significant at $p < .05000$		
	Career attributes	Spearman R	p-level
Year-12 students	Cost of training	0.179282	0.005062
	Helping people/making a difference	-0.168460	0.008505
University students	Job security	-0.066613	0.018598
	Flexibility of working arrangements	0.174165	0.000000
	Level of salary/wage	0.097132	0.000590
	Helping people/making a difference	-0.084790	0.002719
	Increased choice of career directions	0.108717	0.000119

As a result of factor analysis a minimum of two and a maximum of six general factors can be selected to show the career attributes that are most influential for choosing teaching as a career (Table 2). 'Factor 1' for Year 12 and University students, and for

the teacher cohort lists career attributes that are very significant in choosing teaching as a career (Table 2).

Table 2 General factors for choosing teaching as a career

Group	Career attributes	Factor loadings (Marked loadings are >.700000)					
		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Year-12 students	Job security	0.735330					
	Establishing a balance between work and home	0.818083					
	Personal fulfillment	0.754667					
	Helping people/making a difference	0.726521					
	Cost of training		0.854519				
	Length of training		0.840061				
Uni students	Flexibility of working arrangements			0.803888			
	Establishing a balance between work and home			0.739477			
	Personal fulfillment		0.741924				
	Status/prestige				0.780490		
	Helping people/making a difference		0.773403				
	Cost of training	0.873173					
	Length of training	0.877506					
Teachers	The career pathway	0.742023					
	Induction programs		0.711210				
	Mentoring programs		0.790945				
	The balance between teaching and administration duties					0.740589	
	Level of prescriptive structure of the curriculum						0.802079
	Level of professional judgement in the curriculum				0.707194		
	Collaborative process within the school	0.816190					

Group	Career attributes	Factor loadings (Marked loadings are >.700000)					
		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
	The quality of professional development programs available			0.8325 90			

In brief, job security, balance between work and home, personal fulfilment, helping people, cost and length of training, career pathway in teaching and collaborative processes within the schools are the most important variables of choosing teaching as a career in general.

Further analysis looked at general career attributes and three different areas of teaching, primary school, secondary school and special education. The general career attributes of respect for teaching as a profession, personally suited for primary and secondary school teaching, teaching as a fall-back option, student discipline problems and special education teaching has its own rewards are chosen by Year 12 and University students, which have significant relationship with their choice of teaching career (Table 3).

Table 3 Correlation between type of teaching and specific teaching career attributes

Group	Chosen career	Attributes	Marked correlations are significant at p <.05000	
			Spearman R	p-level
Year-12 students	Primary school teaching	Respect teaching as a profession	0.235276	0.00022 2
		Personally suited to be a Primary teacher	0.578337	0.00000 0
		Personally suited to be a Secondary teacher	0.282979	0.00000 8
		Would only consider teacher as a fall-back option	0.204181	0.00140 5
		Would not consider teaching because of student discipline problems	-0.241546	0.00014 8
		Teaching is a good option because of the low university entry scores	0.261054	0.00003 9

Group	Chosen career	Attributes	Marked correlations are significant at $p < .05000$	
			Spearman R	p-level
	Secondary school teaching	Respect teaching as a profession	0.326273	0.000000
		Personally suited to be a Primary teacher	0.241206	0.000151
		Personally suited to be a Secondary teacher	0.643965	0.000000
		Would only consider teacher as a fall-back option	0.220255	0.000558
		Would not consider teaching because of student discipline problems	-0.134160	0.037009
		Non-teaching professional employment in schools is increasing	0.192029	0.002702
		Teachers are well respected in the community	0.181998	0.004507
		Teaching is a good option because of the low university entry scores	0.244860	0.000119
	Special education	Respect teaching as a profession	0.246476	0.000103
		Personally suited to be a Primary teacher	0.313901	0.000001
		Personally suited to be a Secondary teacher	0.223278	0.000453
		Would only consider teacher as a fall-back option	0.151533	0.018096
		Would not consider teaching because of student discipline problems	-0.148721	0.020379
		Teachers are well respected in the community	0.154142	0.016180
		Teaching is a good option because of the low university entry scores	0.183539	0.004095
Special education has its own rewards		0.283688	0.000007	
University students	Primary School Teaching	Respect teaching as a profession	0.339892	0.000000
		Personally suited to be a Primary teacher	0.820290	0.000000
		Would only consider teacher as a fall-back option	-0.467533	0.000000
		Would not consider teaching because of student discipline problems	-0.412493	0.000000
		Teachers are not paid enough for the work they do	0.159612	0.000000
		Teaching is a good option because of the low university entry scores	-0.073925	0.008988

Group	Chosen career	Attributes	Marked correlations are significant at $p < .05000$	
			Spearman R	p-level
Secondary School Teaching	Chosen career	The career pathway for teachers is limited	-0.190314	0.000000
		Special education has its own rewards	0.234093	0.000000
		Respect teaching as a profession	0.169988	0.000000
	Secondary School Teaching	Personally suited to be a Primary teacher	0.087050	0.002084
		Personally suited to be a Secondary teacher	0.770827	0.000000
		Would only consider teacher as a fall-back option	-0.125234	0.000009
		Would not consider teaching because of student discipline problems	-0.230947	0.000000
		Teachers are not paid enough for the work they do	0.143065	0.000000
		Non-teaching professional employment in schools is increasing	0.089167	0.001615
		Teachers are well respected in the community	-0.080443	0.004461
		Teaching is a good option because of the low university entry scores	-0.112542	0.000068
Special education has its own rewards	0.081050	0.004169		
Special Education	Special Education	Respect teaching as a profession	0.233397	0.000000
		Personally suited to be a Primary teacher	0.425917	0.000000
		Personally suited to be a Secondary teacher	0.116063	0.000040
		Would only consider teacher as a fall-back option	-0.258606	0.000000
		Would not consider teaching because of student discipline problems	-0.302482	0.000000
		Teachers are not paid enough for the work they do	0.069823	0.013618
		Non-teaching professional employment in schools is increasing	0.063998	0.023764
		The career pathway for teachers is limited	-0.172969	0.000000
		Teaching is seen as a semi-professional career	-0.097746	0.000544
		Special education has its own rewards	0.517375	0.000000

A minimum of two and a maximum of three factors can be selected to show the attributes that are contributors to deciding on choosing teaching as a career. ‘Factor 1’ for each student group is very significant in choosing teaching as a career (Table 4). Personally suited for secondary school teaching, teaching as a fall-back option and student discipline problems are the strongest variables of choosing teaching careers by the students. Beside these variables, teachers are respected in the community is a significant variable of currently choosing teaching career.

Table 4 Specific factors in choosing teaching career

Group	Attributes	Factor loadings (Marked loadings are >.700000)		
		Factor 1	Factor 2	Factor 3
Year-12 students	Personally suited for secondary school teaching	0.7671 45		
	Student discipline problems		0.7291 56	
	Teachers are respected in community			0.7760 03
University students	Teaching as a fall-back option	0.7238 91		
	Student discipline problems	0.7321 08		
	Teachers are respected in community			0.7479 60

Analysis were undertaken using the weighted average method on the 23 variables listed to elicit what future measures would be influential in attracting people to consider teaching as a career. Higher salaries, more effective student discipline policies, greater financial assistance for living expenses during teacher training, undertaking a paid 12 month professional experience placement during the teacher education program and guarantee of permanency after two years satisfactory service are the most desirable by the Year 12 students and the eighteen variables (in red and marked *) are most desirable by the University students to set up mind for choosing

future career path as a teacher in Queensland (Table 5). These are also the most important recommendations for attracting more people in teaching career in Queensland.

Table 5 Weighted average scores of the variables as an attracting measure

Year-12 students		University students	
Variable	Score	Variable	Score
Higher salaries*	0.836	Higher salaries*	0.926
Greater financial assistance for living expenses during teacher training*	0.757	Guarantee of permanency after two years satisfactory service*	0.864
Free laptop computers or other hardware	0.752	Undertaking a paid 12 month professional experience placement during the teacher education program*	0.843
Guarantee of permanency after two years satisfactory service*	0.735	Greater financial assistance for living expenses during teacher training	0.84
Undertaking a paid 12 month professional experience placement during the teacher education program*	0.703	Guarantee of minimum employment on teacher training graduation	0.839
More effective student discipline policies*	0.701	Flexible teaching placement options*	0.834
Additional leave provision	0.697	Higher remote location allowances*	0.81
The opportunity to work overseas as a teacher	0.695	More effective student discipline policies*	0.803
Flexible teaching placement options	0.693	Better career advancement*	0.801
Better career advancement	0.687	Greater employment mobility between schools*	0.787
More positive media presentation of teachers	0.681	Subsidised accommodation*	0.785
Subsidised accommodation	0.679	Reduced FEE-HELP fees*	0.76
Higher remote location allowances	0.676	More positive media presentation of teachers*	0.76
Guarantee of minimum employment on teacher training graduation	0.673	Additional leave provision*	0.76
Not being asked to teach outside of your subject area	0.66	The opportunity to work overseas as a teacher*	0.741
Reduced FEE-HELP fees	0.657	Mentoring programs*	0.726
Lower workloads	0.649	Lower workloads*	0.721
Greater employment mobility between schools	0.64	More flexible recruitment process	0.717

International exchange programs	0.64	More personalized recruitment of teachers*	0.708
More flexible recruitment process	0.628	Free laptop computers or other hardware	0.691
Shorter university teaching courses	0.623	Not being asked to teach outside of your subject area	0.688
More personalized recruitment of teachers	0.613	International exchange programs	0.679
Mentoring programs	0.584	Shorter university teaching courses	0.665

Factor analysis reduced the variable list to four factors which are viewed as primarily responsible for attracting people in teaching as a career, 'Factor 1' for Year 12 and University students and current teacher is very significant for choosing teaching as a career (Table 6). Reduced education fees, guarantee of permanency after two years of satisfactory service, increased understanding of career paths, promotion of DET website, better networking with university career advisor and highlighting teaching lifestyle are the most desirable variables chosen by the students and teachers as a measure to attract more people to teaching.

Table 6 Factors as a measure of attracting more people into the teaching career

Group	Variable	Factor loadings (Marked loadings are >.700000)			
		Factor 1	Factor 2	Factor 3	Factor 4
Year-12 students	Reduce FEE-HELP fees	0.79713 6			
	International exchange programs		0.76442 3		
	Shorter university teaching courses				0.75124 2
	Undertaking a paid 12 month professional experience placement during teacher education program			0.70562 3	
	The opportunity to work overseas		0.70685 7		
University students	More positive media presentation of teachers				0.72558 5
	International exchange programs		0.78433 8		
	Guarantee of permanency after two years satisfactory service	0.71420 8			

Group	Variable	Factor loadings (Marked loadings are >.700000)			
		Factor 1	Factor 2	Factor 3	Factor 4
	The opportunity to work overseas as a teacher		0.849748		
	Not being asked to teach outside of your subject area			0.743708	
Teachers	Reduced higher education fees				0.724894
	Greater financial assistance for living expenses during teacher training			0.700271	
	Higher remote location allowance			0.758469	
	Guarantee of minimum employment on teacher training graduation		0.705015		
	Increased understanding of career paths/range within teaching	0.708804			
	Promotion of the DETA website	0.770546			
	Better networking with University career advisors	0.871755			
	Highlighting the teaching lifestyle	0.767516			

Besides the above variables, students and teachers also selected financial assistance during the teacher training, opportunity to work overseas as a teacher, more positive media presentation, international exchange programme, not being asked to teach outside the own subject area, higher remote location assistance, guarantee of minimum employment on teacher training graduation. These are the more significant variables to attract more people to consider teaching as a career in Queensland.

Conclusions

The Year 12 students, university students and teachers who participated in the research have indicated that job security, balance between work and home, personal fulfilment, helping people, cost and length of training, career pathways within teaching and collaborative processes within the schools are the most important considerations in choosing teaching in the public sector, as a career. In addition, the

systemic issues of wage disparity, allowing for greater employment flexibility, providing on going training and better incentives for rural placements were significant.

In attracting more people to teaching as a career in Queensland, students and teachers indicated some significant career and teaching-specific attributes that need to be considered as part of any promotion or recruitment initiatives. These are reduced education fees, job security, increased understanding of career paths, and better networking with career advisors.

The study findings indicate that educational authorities need to consider ways to reduce fees and costs associated with attaining a teaching qualification. Increasing the number of teaching scholarships, which generally require recipients to work for a specified amount of time in a specific school or location, will address the second criteria of guaranteeing job permanency. Year 12 students, university students and teachers all indicated that job security is a significant variable in choosing a career. A plan that reduces education fees and guarantees employment for a specified period of time may both attract and retain qualified candidates to teach in Queensland schools.

The remaining four variables identified in this study are all associated with better promotion of Education departments as an employer of choice. Investing in a promotional campaign that highlights the professional aspects and career pathways teaching can provide may attract a more diverse group of school leavers, university graduates and career changers. While about 40 percent of participants indicated that they had little or no understanding of career paths related to teaching, an increased understanding of career paths was the third most significant consideration when choosing teaching as a career.

Additionally, many participants were unfamiliar with the department's recruitment process. Since students indicated that they rely significantly on the career information given by their teachers and lecturers, it is important for department's to network closely with educational institutions and career advisors, and promote their websites as a place where relevant information can be found.

The findings indicate that using the existing website as a vehicle to provide information about recruitment, career pathways, and financial assistance available to pursue teaching qualifications will be a worthwhile endeavour. A promotional campaign that highlights the teaching lifestyle as personally fulfilling and providing a balance between work and home may also attract more people to pursue teaching as a career choice. In relation to rural and remote locations there is a need to undertaking additional support, mentoring, professional and career path development programs.

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Notes:

1 Primary and Secondary.

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