INDICATORS OF STAFF EFFICACY IN SEVEN SPECIAL SCHOOLS IN THE SYDNEY REGION

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Abstract

Staff in Special Schools are seldom the focus of research, yet work with a student group some might consider demanding and stressful. Staff who work in Catholic special Schools are under-represented in the academic literature. The motivation and efficacy of Special School staff were studies in 7 Catholic Special Sschools. These staff were observed to have high efficacy and high occupational commitment. Occupational commitment was highly predicted by affective domain variables and staff collective efficacy was predicted the scale variable Professional Vitality among staff and negatively associated with the scale variable Negative Staff Affect.

Introduction

During the 2012 school year, a research was conducted among the seven Catholic Special Schools in the Sydney region. These schools are ones wholly devoted to the Special needs student group they serve. Schools which include a special needs unit within their mainstream structure were not included in the sample framework.

Literature Review

This section reviews the literature that pertains to the two constructs of self-efficacy and collective efficacy within the context of the teacher in the school. When speaking about the teacher in the school, this review restricts itself to research studies that address each construct in relation to the professional roles, tasks and activities of the teacher.

Self efficacy

Self-efficacy is an expectancy belief of personal performance on a given task (Pajares, 1996). Self-efficacy more accurately predicts performance than other motivational constructs simply because self-efficacy is task contextualised. Self-efficacy is more related to motivational variables than self-esteem which is more related to affective variables (Chen, Gully, & Eden, 2004).

> People with a low sense of efficacy avoid difficult tasks. They have low aspirations and weak commitment to their goals. They turn inward on their self-doubts instead of thinking about how to perform successfully. When faced with difficult tasks, they dwell on obstacles, the consequences of failure, and their personal deficiencies. Failure makes them lose faith in themselves because they blame their own inadequacies. They slacken or give up in the face of difficulty, recover slowly from setbacks, and easily fall victim to stress and depression.
>
> People with high perceived self-efficacy, by contrast, approach difficult tasks as challenges to be mastered rather than threats to be avoided. They are deeply interested in what they do, set high goals, and sustain strong commitments. They concentrate on the task, not on themselves. They blame their failures on remediable ignorance, lack of skill, or insufficient effort. They redouble their effort in the face of obstacles and soon recover confidence after a setback. This outlook sustains motivation, reduces stress, and lowers any vulnerability to depression. (Bandura, 1997, no page)

The description of persons exhibiting high self-efficacy neatly outlines how one would want a teacher to approach professional tasks in the classroom.

Teacher Efficacy

"Teacher efficacy, as a motivational construct, proposes that level of efficacy affects the amount of effort a teacher will expend in a teaching situation and the persistence a teacher will show in the face of obstacles" (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998, p.213). Teacher efficacy is described as a teacher's belief in his/her ability to have a positive effect on student learning and is related to such significant variables as student achievement (Woolfolk & Hoy, 1990). Teacher self-efficacy has been associated with resilience to burnout and better mechanisms to cope with teacher stress (Skaalvik & Skaalvik, 2007, 2010), increased career retention (Yost, 2006) and also to predict higher levels of collective efficacy (Skaalvik & Skaalvik, 2007).

Teacher efficacy is an area of research interest. Efficacy as a concept is different from esteem. Self-esteem is a global belief in personally qualities that are greater than cognitive ability: 'I am a good teacher', whereas self-efficacy is task oriented and contextualized by the task and so is not a global belief: 'Although this is a difficult class to teach this topic, I have the skills to teach this group of students' (Palladino, 2006). Teacher efficacy describes those motivational, task contextualized constructs related to their professional roles in educational settings to enable students to achieve learning outcomes. Resiliency is a significant, and indeed foundational, step in developing self-efficacy.

Self-efficacy is a useful construct for research (Pajares, 1996). Several scales offer strong psychometric properties and these scales also exhibit strong predictive validity across different school settings (Labone, 2004; Patterson, Collins, & Abbott, 2004). Young teachers delivering a course for the first time, even content outside their main knowledge base, evidence outcomes associated with self-efficacy (Yilmaz, 2009). Self-efficacy is associated with successful team work among teachers (Chan, Lau, Nie, Lim, & Hogan, 2008; Takahashi, 2011). Self-efficacy as a construct has been argued to be more useful than motivational constructions due to its task context-nature, self-efficacy being predictive of teacher performance across a range of school types, professional tasks and career stages (Kang & Neitzel, 2005).

A number of measures or scales of teacher self-efficacy have been developed. While some theoretical differences of the efficacy construct have been evident (Erdem & Demirel, 2007; Tschannen-Moran, et al., 1998), The Teacher Self Efficacy Scale (Dembo & Gibson, 1985), the TEBS-Self (Dellinger, Bobbett, Olivier, & Ellet, 2008) and the Ohio State Teacher Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001) have been grounded in Bandura's earlier theorizing. The literature supports the strength and utility of the Teacher Efficacy Scale (Woolfolk Hoy, 2008) as the instrument incorporating both Bandura's original construction of teacher self-efficacy as well as the strongest psychometric properties (Brouwers & Tomic, 2003; Tschannen-Moran & Woolfolk Hoy, 2001; Tschannen-Moran, et al., 1998). This Teacher Efficacy Scale is readily accessed from the author (Woolfolk Hoy, 2008).

Collective efficacy

Collective teacher efficacy, or more simply in this review 'collective efficacy', is a more recent research program. "Collective efficacy refers to members' perceptions of their group's competency … or aggregated ability to successfully complete a designated task" (Zellars, Hochwarter, Perrewe, Miles, & Kiewitz, 2001, pp.483-484). That collective efficacy has been overlooked for some time has limited school effectiveness studies (Goddard, 2001) although in more recent times collective efficacy research has been more active (Klassen, Tze, & Betts, 2011). Collective efficacy has also been found to be a stable construct across international education systems (Schecter & Tschannen-Moran, 2006) which argues for its usefulness and validity as a construct. Collective efficacy has been demonstrated to be linked with increased school performance (Goddard, Hoy, & Woolfolk Hoy, 2000; Goddard, LoGerfo, & Hoy, 2004) and teacher teamwork (Kurz & Knight, 2004) as well as increased resilience to stress (Klassen, 2010), within both urban (Goddard & Goddard, 2001) and Special Schools (Viel-Ruma, Houchins, Jolivette, & Bension, 2010). School improvement (Goddard, LoGerfo, et al., 2004) and successful leadership are also linked to collective efficacy of the teaching staff (Ross & Gray, 2006).

Research has shown that collective efficacy is related both to teacher characteristics (Zellars, et al., 2001) and teacher self-efficacy (Goddard, Hoy, & Woolfolk Hoy, 2004) as well as socioeconomic

indicators of the school (McCoach & Colbert, 2010) and learners (Adams & Forsyth, 2006; Goddard & Skrla, 2006). There are several instruments to measure collective efficacy. The Collective Efficacy Scale (Hoy, 2010) has strong psychometric properties (Goddard, 2002), is frequently used and is grounded, like the Teacher Efficacy Scale (Woolfolk Hoy, 2008), in Bandura's original constructs (Goddard, 2001). Hoy's Collective Efficacy Scale also has a short form (Hoy, 2010) which is readily accessed for research purposes and has comparable psychometric properties to the longer, original instrument (Goddard, 2002).

Method

A survey was developed using instruments identified in the literature to operationalize the constructs of teacher resilience, teacher efficacy and staff collective efficacy. Parts of the survey data are reported below.

School Principals were contacted firstly by email and then personally. An opportunity was offered to meet with the seven Principals early in 2012 at one of their organisational meetings where the idea of this research was presented and Principals' feedback was received. Subsequently, after modifications as suggested by the Principals had been completed and ACU HREC approval was obtained, the author contacted the school to arrange a suitable time to meet with the executive to explain the survey and seek permission to include the school in the sample. Then the researcher met at an arranged time, usually during a programmed staff meeting, to ask staff to contribute to this research. During this meeting the purpose of the research was explained, staff questions were answered and survey forms distributed, and finally collected.

A second part of the survey form invited participants to an interview to further discuss the research topic of staff efficacy. The outcomes of the staff interviews is not reported in this article.

Schools Sampled

Table 1 reports the fulltime effective staff numbers and student enrolments of the seven schools in this study. Student enrolments can vary in some of these schools as the behavioural schools aspire to transition students back to mainstream, so numbers in these schools fluctuate throughout the academic year. Several schools, in particular the Dunlea Centre, employ a large number of casuals due to the nature of their program which is residential four nights per week, based on social skills as well as educational classes.

Each school leader has explicitly permitted the use of the school name in this research report. Each of these schools is within the Catholic educational system, and one school, St Dominic's at Mayfield has recently become part of the Maitland Catholic diocesan system. The other six schools are independent of diocesan school systems, functioning under the aegis of their particular religious order.

Table 1 Seven Catholic Special Schools

School	Student focus	FTE Staff	No. Students
Dunlea Centre at Engadine	Dunlea Centre incorporates therapy, education and family support in an out-of-home care setting with an end goal of family restoration wherever possible. The out-of-home care nature of the program allows the child and the family space to bring about the change.[1]	30	32
John Berne at Lewisham	Berne is for students who specifically need time out to improve their literacy, numeracy, and social skills in a flexible learning environment[2].	20	43
Mater Dei at Camden	Mater Dei is an organization that provides early intervention therapy services, education and residential programs for	64	142

[1] http://www.salesians.org.au/index.php/schools/boys-town

[2] http://www.johnberneschool.org/about/our-purpose/

School	Student focus	FTE Staff	No. Students
	babies, children and young people with an intellectual disability or developmental delay[3].		
St Dominics at Mayfield	St Dominic's Centre for Hearing Impaired Children provides an education of excellence for children who are deaf and hearing impaired[4].	7	23
St Edmunds at Wahroonga	St. Edmund's is a Year 7-12 co-educational special high school for teenagers with a wide range of disabilities including sensory impairment, intellectual disability and autism[5].	40	124
St Gabriels at Castle Hill	St Gabriel's Primary Special School catering for children with hearing impairment and other special needs such as intellectual disability and autism in the mild to moderate range[6]	15	41
St Lucy at Wahroonga	St Lucy's is a school for children with disabilities and is based at Wahroonga with satellite classes on the Northern Beaches[7]	45	165

The numeric data of Table 1 was supplied by each school (personal communication).

Staff Demographics

The survey included some preliminary staff demographic questions. Table 2 shows the distribution of the variable of age; gender and years working with that school for the seven Special Schools of this sample.

This research does not attempt to explain the differences in staff demographics. These demographics of age, gender, years of working in schools and years of working in each school are reported in order to set the context for the research of staff efficacy.

Table 2* Respondent Demographic Variables by School

School	**Age** (years)			Gender		Years Working at this School			Total No.
	Mean	Median	Max	No. Females	No. Males	Mean	Median	Max	
Dunlea Centre	34.24	33	57	16	9	4.62	4	13	25
John Berne	44	44	65	11	6	6.93	7	13	17
Mater Dei	46.73	48.5	62	20	3	9.13	7.5	32	23
St Dominics	52.5	55	57	3	1	6.50	5	14	4
St Edmunds	48.34	52	62	31	7	6.50	5.5	24	38
St Gabriels	41.38	43	54	10	0	2.25	1.5	5	10
St Lucy	40.54	40.5	69	24	1	5.03	2.75	21	25

* The data of Table 2 represents the data from the returned surveys.

Figure 1a graphs the age distributions of the schools. St Dominic's has a small staff (Table 1) and the smallest number of responses to the survey (n=4) so its higher average age and smaller range is more indicative of the smaller staff size. Dunlea has a clearly younger staff cohort which may reflect of the residential component of that school's programme, where Dunlea students stay overnight four nights a week, Monday to Thursday.

The gender balance of staff in these schools is predominantly female (Table 2). All the sample schools are co-educational, although there are more males enrolled in these schools as is typical of disability special schools generally.

[3] http://www.materdeicamden.org/
[4] http://www.mn.catholic.edu.au/schools/region-map/north/mayfield-st-dominics-centre-for-hearing-impaired
[5] http://www.stedmunds.nsw.edu.au/
[6] http://www.stgabriels.nsw.edu.au/
[7] http://stlucys.nsw.edu.au/about-st-lucys

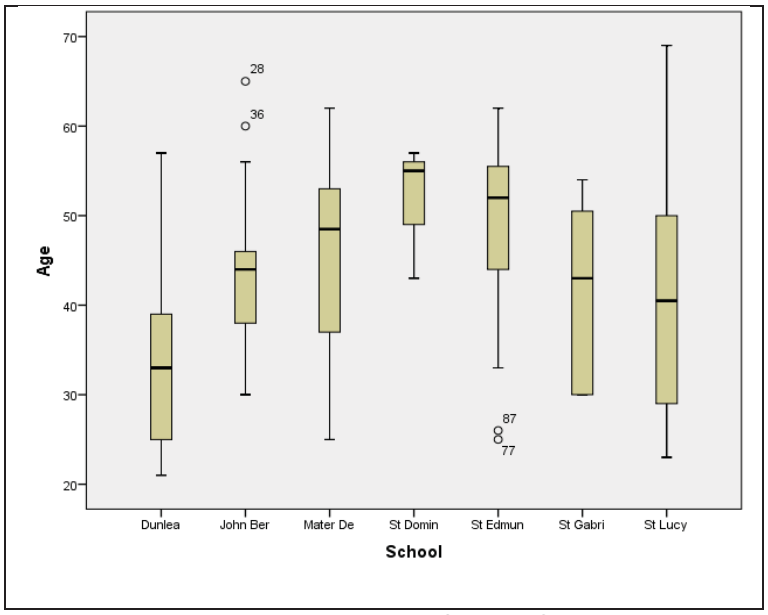

Figure 1a Age Profiles by School

Both Dunlea and St Gabriel's (Fig. 1b) have staffs reflective of less number of years working in schools. St Gabriel's is a school for those with hearing impairment which has mainly young students so the staff are reflective of early childhood and early primary teachers. St Gabriel's has recently expanded in terms of rooms, students and staff and the employment of new teachers is evident in Figure 1b. St Lucy's has many young visually impaired students, in ways similar to St Gabriel's, while St Lucy's has a group of more experienced teachers on its staff.

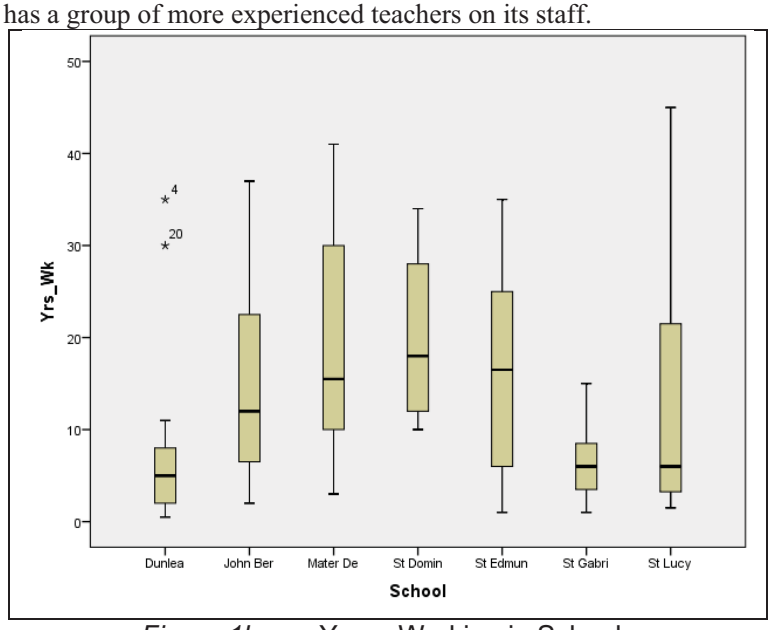

Figure 1b Years Working in Schools

St Lucy's, St Gabriel's and Dunlea have the staffs who have worked at their present schools the shortest mean time (Table 2). St Gabriel's has the lowest average time of employment and with St Gabriel's both Dunlea and St Lucy's have the lowest median employment times of staffs in the seven schools (Fig 1c).

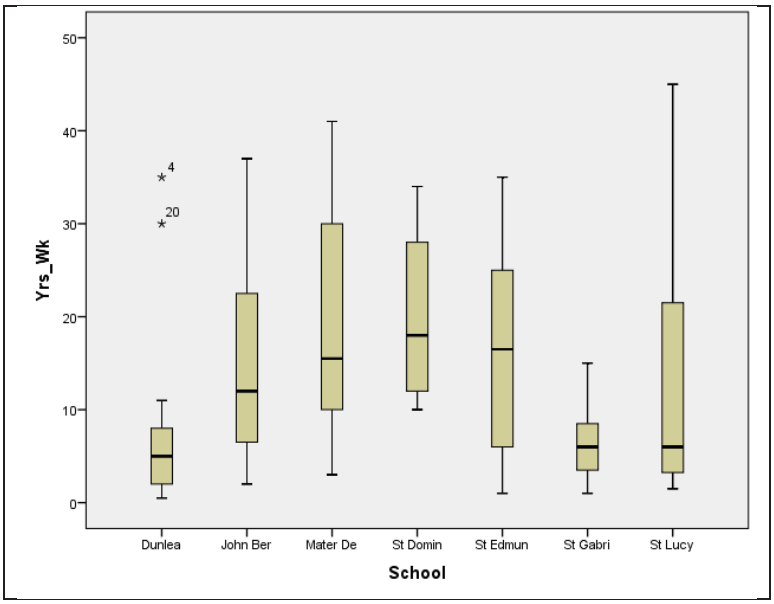

Figure 1c Years Working at this School

Survey Outcomes

The survey data comprised 145 individual items. These items were originally organised into 11 major scales. These major scales are represented in Table 3.

Table 3 Original Survey Scales

Scale Name	Initial number of items
Job satisfaction	8
Achievement Striving Scale	10
Occupational Commitment	6
Affect-as-Staff member	29
Affect-at-Work	29
Professional vitality	8
Personal vitality	11
Professional Stress	9
Personal Stress	10
Personal Efficacy	12
Collective Efficacy	12

Initial data analysis included factor analysis using SPSS ver.20 of each individual scale. The factor analysis used principal components analysis with a varimax rotation, keeping all other defaults. These analyses yielded sub factors within some scales. The scales Occupational Commitment and Collective Efficacy maintained univariate loadings. Sub factors on other scales are scrutinised and rotted component loadings used to calculate sub scale scores. The sub scales were identified and labelled according to a content analysis of their component items. The sub scales of each major scale are identified in Table 4 and the component items, with reference to the original survey instrument are listed.

Table 4 Sub scales formed from major scales after factor analysis.

Major Scale (Table 3)	Component sub scales	Items in sub scales
Job Satisfaction	Job Satisfaction at Present	JS1, JS2, JS3, JS4, JS6
	Job Satisfaction to Future	JS5, JS7, JS8
Achievement Striving Scale	Achievement Striving Scale from Job	AS1, AS1, AS5, AS9
	Achievement Striving Scale from Students	AS7, AS8
Affect-as-Staff member	Affect-as-Staff member Positive	AS1, AS7 AS8, AS9, AS10, AS12, AS16,

Major Scale (Table 3)	Component sub scales	Items in sub scales
		AS19, AS21, AS22, AS23, AS27, AS29
	Affect-as-Staff member Negative	AS2, AS3, AS4, AS5, AS6, AS11, AS13, AS14, AS15, AS17, AS18, AS20, AS24, AS25, AS26, AS28
Professional Vitality	Professional Vitality from Students	PVal2, PVal3, PVal4
	Professional Vitality from Staff	PVal1, PVal5, PVal7, PVal8
Personal Vitality	Personal Vitality within ME	PVit1, PVit2, PVit3, PVit4, PVit7, PVit8
	Personal Vitality Balanced life	PVit5, PVit6, PVit9, PVit10, PVit11
Professional Stress	Professional Stress OK, coping	PStr2, PStr3, PStr4, PStr5, PStr6, PStr7
	Professional Stress Future (anticipated)	PStr1, PStr8
Personal Stress	Personal Stress - relationships	PS1, PS2, PS4, PS6, PS7
	Personal Stress - processes	PS5, PS8, PS9, PS10
Personal Efficacy	Efficacy in Student Engagement	PE2, PE3, PE4, PE11
	Efficacy in Instruction Strategies	PE5, PE9, PE10, PE12
	Efficacy in Class Management	PE1,PE 6, PE7, PE8
Affect-at-Work	Affect-at-Work Positive	AW7, AW8, AW9, AW10, AW12, AW16, AW19, AW21, AW22, AW23, AW27, AW29
	Affect-at-Work Negative	AW2, AW3, AW4, AW5, AW6, AW11, AW13, AW14, AW15, AW17, AW18, AW20, AW24, AW25, AW26, AW28
Occupational Commitment	Occupational Commitment	OC1, OC2, OC3, OC4, OC5, OC6
Collective Efficacy	Collective Efficacy	CE1,CE2, CE3, CE4, CE5, CE6, CE7, CE8, CE9, CE10,CE11, CE12

The average scores of each sub scale are reported in Table 5. Table 5 has a variety of numbers for each scale (column two): the computation of sub scales excluded instances with missing values so the number of individuals whose responses contributed to the scale scores depended on responses being available for all the items in that sub scale.

The scale (and sub scale) intercorrelations were then scrutinised. Two decisions were made as an outcome of this scrutiny; the first decision was to focus on the two univariate scales of Occupational Commitment and Staff Collective Efficacy; and the second decision was to regress scales significantly ($p<0.05$) correlated with either scale onto the target scale. Hence, two multiple, step-wise regression analyses were performed, one for Occupational Commitment and the other for Staff Collective Efficacy.

Table 5. Sub Scales Scores for Whole Sample

	N	Minimum	Maximum	Mean	Std. Deviation
Occ_Commitment	141	1.80	18.88	16.3271	2.59948
JobSat_Present	140	7.54	26.41	22.1112	3.17122
JobSat_Future	137	2.27	15.90	12.9935	2.69456
Per_Strs_Relatns	141	8.54	15.87	13.7139	1.71643
Per_Strs_Proc	140	4.55	13.45	9.9348	1.95409
ProStress_OK	135	8.63	18.90	15.2388	1.82377
ProStress_Future	140	-2.34	1.85	-.7273	.72275
ProfVital_Studs	138	3.03	11.88	10.7112	1.35282
ProfVital_Staff	139	6.35	16.60	13.4299	1.99836
Achiev_Prof	135	4.00	13.65	9.5285	2.21007
Achiev_Job.	142	4.38	12.28	10.6607	1.31354
Achiev_Studs	131	1.35	6.77	4.1693	1.15058
PersVit_Me	140	9.71	21.73	19.6100	2.24141
PersVit_Balance	139	6.16	17.21	13.4151	2.50681
Efficacy_StudEngage	127	4.00	36.00	27.7559	5.53448
Efficacy_InstuctStrat	122	4.00	36.00	28.5164	5.51067
Efficacy_ClassManage	124	4.00	36.00	29.4194	5.12779

Affect_Work_Pos	114	20.23	38.55	31.6426	3.83053
Affect_Work_Neg	122	10.55	96.94	21.8672	8.92766
Affect_Staff_Neg	128	10.68	41.49	21.2934	5.71004
Affect_Staff_Pos	118	17.55	41.46	33.8752	3.94535
CollectiveEfficacy	131	35.00	72.00	57.5038	7.51447

Table 5 indicates that staff report high levels of the target variables of Occupational Commitment and Collective Efficacy. Naturally, not all staff report maximum scores in these target variables, and the statistical analyses attempt to determine which measured variables account for the differences between higher and lower scores in these two target variables. As the target means are quite high (Table 5), regression analyses were used to account for differences in target variables based on staff members' responses across a range of component scales. Regression analysis does not require partitioning the sample into high and low scoring groups, and can account for incrementally cumulative differences across a range of items, or question responses. Additionally, regression analyses aim at the most parsimonious explanation of the variations, so that the fewest variables are used to predict the variance in the target variable.

Occupational Commitment

Table 6 displays the outcomes of the stepwise regression on Occupational Commitment. In this analysis, only three sub scales contribute to a significant prediction of Occupational Commitment. The third model accounted for 65% of the variance in Occupational Commitment (R^2 = .648). each sub scale's contribution to the regression remained highly significant (Table 6).

Table 6 Regression Coefficients on Occupational Commitment

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig
		Beta	Std. Error	Beta		
1	(Constant)	3.595	1.341		2.680	.009
	JobSat_Present	.574	.060	.724	9.561	.000
2	(Constant)	2.342	1.250		1.873	.065
	JobSat_Present	.437	.063	.551	6.948	.000
	JobSat_Future	.328	.076	.345	4.347	.000
3	(Constant)	.508	1.389		.365	.716
	JobSat_Present	.347	.070	.437	4.980	.000
	JobSat_Future	.309	.073	.325	4.221	.000
	Affect_Work_Pos	.130	.049	.216	2.661	.009

Figure 3 offers a diagram of the outcome of the multiple regression analysis. In this regression analysis, only those sub scales which presented a significant correlation with the scale Occupational commitment were entered. This restriction was to attempt to maximise the explanatory power of the analysis. Figure 3 shows the scales which remained in the analysis, such that the beta weights are significant at p<5%. Table 6 shows that only three scales contribute significantly to Occupational Commitment, and those scales in this regression all contribute positively.

Figure 3 shows that in this model, based on the sample of staff across seven special schools, of Occupational Commitment. Scales that support Staff Occupational Commitment are Job Satisfaction both Present and Future and a Positive Affect at Work.

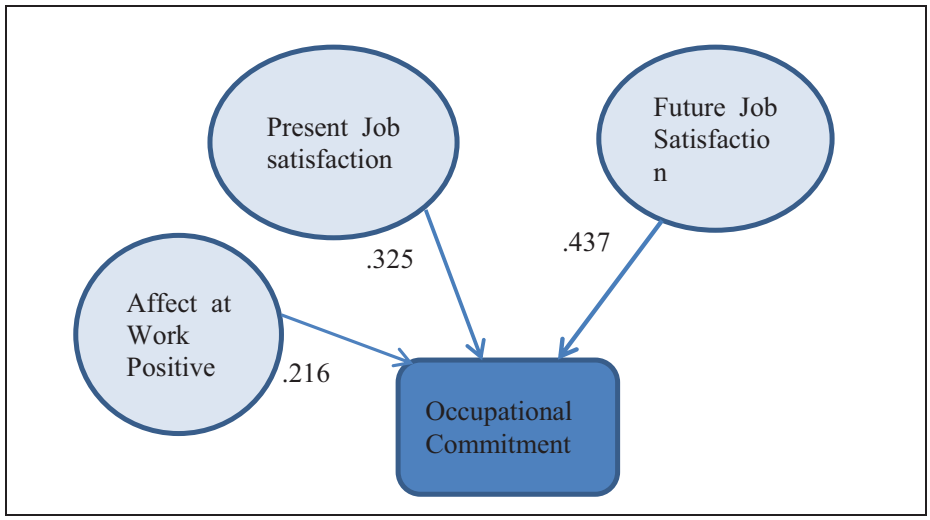

Figure 3 Model of Occupational Commitment

Staff Collective Efficacy

The inter scale correlations matrix was examined for those scales that were significantly correlated ($p < 0.05$) with the univariate scale Staff Collective Efficacy. Those scales were entered into a step-wise multiple regression analysis.

Table 7 displays the outcome of the stepwise regression of variable on Staff Collective Commitment. Only three scales remained significant in this step-wise regression. This regression accounted for 35% of the total variance (R^2).These variables are Professional Vitality with Staff, Achievement Focus to Students and Negative Affect among Staff. The last two scales load negatively on the Collective Efficacy Scale. Each sub scale's contribution remained highly significant (Table7).

Table 7 Regression Coefficients on Collective Efficacy

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	70.179	3.067		22.879	.000
	Affect_Staff_Neg	-.625	.142	-.448	-4.400	.000
2	(Constant)	78.007	3.666		21.276	.000
	Affect_Staff_Neg	-.582	.134	-.417	-4.355	.000
	Achiev_Studs	-2.067	.602	-.329	-3.436	.001
3	(Constant)	61.565	6.559		9.386	.000
	Affect_Staff_Neg	-.467	.133	-.335	-3.511	.001
	Achiev_Studs	-2.123	.573	-.338	-3.703	.000
	ProfVital_Staff	1.056	.357	.281	2.961	.004

A negative loading of a scale in the regression says that high scores, for example on Negative Affect with Staff predicts low scores in Collective Efficacy (Table 7).

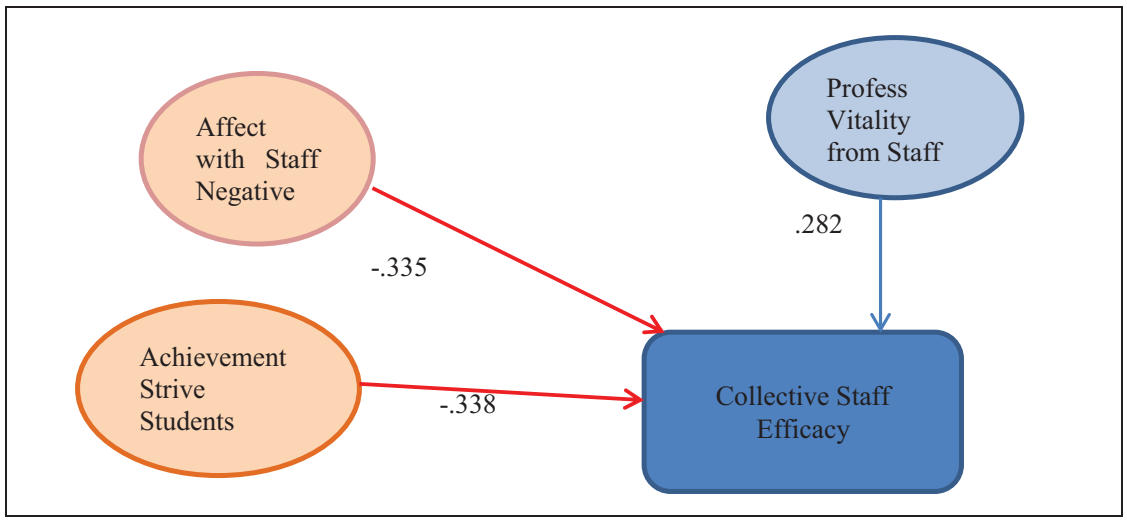

Figure 4 Model of Collective Efficacy

Figure 4 displays the data of Table 7. The negative contribution of focus on achievement of students may be surprising: whether the fact that these staff all work in special schools and hence might perceive that academic student achievements could be 'hard won' might contribute to the finding. Alternatively, the sub scale may need to be more closely investigated.

The sub scale of Achievement Striving Students has two items. These items are:

AS7 I feel the success of my pupils is a reflection of my own abilities as a professional

AS8 I feel annoyed at pupils who don't put any effort into their studies

Table 7 reports that high levels of agreement with these two items predicts low staff collective efficacy. For AS7 those staff who report that their sense of professional achievement is not solely tied to student achievement would score this item low. In AS8, if staff do not get annoyed if students' lack of efforts, this items would be scored low. It is argued that this sub scale is in accord with practical experiences of efficacy, in that those staff who understand themselves to have high efficacy do not believe that student performance solely measures their professional skills, nor do efficacious staff get annoyed when student effort is lacking, indeed efficacious staff have multiple strategies to leverage student effort to achieve learning outcomes.

Collective Efficacy is strongly predicted by a sense of Professional Vitality from Staff which measure the meaningfulness and support of colleague staff and the Principal. Negative Affect among Staff predicts lowered Collective Efficacy.

Further Analyses

This data is worthy of further analysis. A hypothesised model to account of all the variables has been developed and will be subject to a Structural Equation Modelling analysis. Also, the interview data will be the subject of a subsequent article.

The interviews have been complex to synchronise. Collaborating with staff across seven schools across a wide geographic range proved to be more onerous that was initially envisaged. While a number of interviews have already been conducted, it has proved to be difficult to synchronise availabilities with a number of potential interview participants who had indicated on survey forms their willingness to engage in an interview.

The interviews are targeted towards the two variables of Staff Occupational Commitment and Staff Efficacy. The interview analyses will explore at depth staff experiences and explanatory narratives of collective efficacy and their commitment to their roles in these special schools.

Discussion

There are several findings worthy of note. The first noteworthy finding is that the regression analyses on Occupational Commitment and Collective Efficacy each yielded only three significant predicting variables. In each analysis, the majority of scales, while individually correlated with the target scale, did not contribute unique explanation of target variance and was eliminated in the step-wise regression. This research has achieved an economy of predictive variables, which is itself likely to be useful to educational leaders.

The second noteworthy finding is that these analyses have been across the staffs of seven very different special schools. These schools vary from those catering for behaviourally disordered students to those with severe physical and learning disabilities; schools at which students attend daily and schools with residential components. The staff members of these schools can be considered more alike than different on the face of these analyses, since the multivariate analyses held across the whole data sample.

Figure 3 reports the scales that contributed to Occupational Commitment in this sample of seven Special School staff. Only those scales that correlated to a significant level were included in the multiple regression which forms the model of Figure 3. Figure 3 reports that Job Satisfaction, with both sub scales of satisfaction in the present and the subscale of positive affect at work each contribute to staff Occupational Commitment. This finding is in harmony with the research literature. What is of theoretical interest is that only three factors were empirically significant in predicting Occupational Commitment. While experienced school leaders might be unsurprised that Job Satisfaction predicts Occupational Commitment, and that good affective relationships at work contribute to Occupational Commitment, of all the workplace variables, only these three were significant in this analysis.

Figure 4 shows that only three scales significantly predict Staff Collective Efficacy. While it might be cosmetically disappointing that two scales load negatively on Collective Efficacy, the converse of these scales is readily interpreted. Figure 4 shows that Collective Efficacy is readily predicted by strong Professional Vitality from colleague Staff members, is negatively loaded by Negative Affect amongst Staff and is negatively loaded by Achievement Striving for Students. As an earlier section discussed, this scale of Achievement Striving for Students is seen as a measure of student achievement as the sole source of staff affirmation and student compliance (making efforts) being a determinant of staff efficacy. It is accepted that the name of this sub scale may need to be revised, yet this revision will be delayed until the interview data gives further insight into staff perceptions of this area.

Lastly, the scales utilised in this research are both well regarded in the current literature and clearly operationalise professional practice. That these scales that operationalise current practice indicate that practitioners can use these scales, and their component items, not only to understand what staff are indicating as important aspects of their lives, but also leaders can use those scales to assess what areas might be usefully addressed to effect changes.

Conclusion

This project has achieved several aims. Without comparing the staff responses school by school, the analysis here has demonstrated that the staff of these seven Catholic Special Schools share common approaches to Occupational Commitment and Efficacy. This commonality will be explored within the interview analyses. The interviews of staff were conducted after the survey data collection, with volunteer staff members discussing their perspectives of efficacy and commitment to their roles.

This research has achieved parsimony of explanation of the two target variables of Occupational Commitment and Collective Efficacy. In each case, three scales predict the target variable. While tacit knowledge of school leaders already accepts the importance of these variables in staff perceptions of their workplace, this research has been able to quantify those factors that are important in the minds of staff members, within this context of Catholic special schools in the Sydney region.

Lastly, the findings of this research may indicate to educational leaders some means to further improve the already high staff commitment and efficacy beliefs of their staffs.

From the Author: *My thanks to the Principals of these Catholic Special Schools in the Sydney region. They have not only warmly welcomed and supported this research, but also generously contributed ideas to its formation, reviewed a draft version of this research report, and encouraged me in these tasks. Their open approach to educational research is praiseworthy. The staff of these schools have without exception made me welcome and gone out of their way to be helpful and to contribute to this research. To all, 'thank you'.*

References

Adams, C. M., & Forsyth, P. B. (2006). Proximate sources of collective teacher efficacy. *Journal of Educational Administration, 44*(6), 625-642.

Bandura, A. (1997). Self-efficacy. [Article]. Harvard Mental Health Letter, 13(9), 4.

Brouwers, A., & Tomic, W. (2003). A test of the factorial validity of the Teacher Efficacy Scale. Research in Education, 69, 67-79.

Chan, W.-Y., Lau, S., Nie, Y., Lim, S., & Hogan, D. (2008). Organizational and Personal Predictors of Teacher Comitment: The Mediating Role of Teacher Efficacy and Identification With School. American Educational Research Journal, 45(3), 597-630.

Chen, G., Gully, S. M., & Eden, D. (2004). General Self-Efficacy and Self-Esteem: Toward Theoretical and Empirical Distinction between Correlated Self-Evaluations. Journal of Organizational Behavior, 25(3), 375-395.

Dellinger, A. B., Bobbett, J. J., Olivier, D. F., & Ellet, C. D. (2008). Measuring teachers' self-efficacy beliefs: Development and use of the TEBS-Self. Teaching and Teacher Education, 24, 751-766.

Dembo, M., H. , & Gibson, S. (1985). Teachers' Sense of Efficacy: An Important Factor in School Improvement. The Elementary School Journal, 86(2), 173-184.

Erdem, E., & Demirel, O. (2007). Teacher Self-Efficacy Belief. Social Behavior and Personality, 35(5), 573-586.

Goddard, R. D. (2001). Collective Efficacy: A Neglected Construct in the Study of Schools and Student Achievement. Journal of Educational Psychology, 93(3), 467-476.

Goddard, R. D. (2002). A Theoretical And Empirical Analysis of the Measurement of Collective Efficacy: The Development of a Short Form. Educational and Psychological Measurement, 62, 97-110.

Goddard, R. D., & Goddard, Y. L. (2001). A multilevel analysis of the relationship between teacher and collective efficacy in urban schools. Teacher and Teacher Education, 17, 807-818.

Goddard, R. D., Hoy, W. K., & Woolfolk Hoy, A. (2000). Collective Teacher Efficacy: Its Meaning, Measure, and Impact on Student Achievement. American Educational Research Journal, 37(2), 479-507.

Goddard, R. D., Hoy, W. K., & Woolfolk Hoy, A. (2004). Collective Efficacy Beliefs: Theoretical Developments, Empirical Evidence, and Future Directions. Educational Researcher, 33(3), 3-13.

Goddard, R. D., LoGerfo, L., & Hoy, W. K. (2004). High School Accountability: The Role of Perceived Collective Efficacy. Educational Policy, 18(3), 403-425.

Goddard, R. D., & Skrla, L. (2006). The Influence of School Social Compostion and Teachers' Collective Efficacy Beliefs. Education Administration Quarterly, 42(2), 216-235.

Hoy, W. K. (2010). Collective Efficacy Scale 2011, from http://www.waynekhoy.com/collective_efficacy.html

Kang, S. J., & Neitzel, C. (2005). Teacher Efficacy Research From an Agentic View. Academic Exchange, 2005(Winter), 219-223.

Klassen, R. M. (2010). Teacher Stress: The Mediating Role of Collective Efficacy Beliefs. The Journal of Educational Research, 103, 342-350.

Klassen, R. M., Tze, V. M., & Betts, S. M. (2011). Teacher Efficacy Research 1998-2009: Signs of Progress or Unfilled Promise? Edcuational Psychological Review, 23, 21-43. doi: 10.1007/s10648-010-9141-8

Kurz, T. B., & Knight, S. L. (2004). An Exploration of the Relationship Among Teacher Efficacy, Collective Teacher Efficacy, and Goal Consensus. Learning Environment Research, 7, 111-128.

Labone, E. (2004). Teacher efficacy: maturing the construct through research in alternative paradigms. Teacher and Teacher Education, 20, 341-359.

McCoach, D. B., & Colbert, R. D. (2010). Factors Underlying the Collective Teacher Efficacy Scale and Their Meditating Role in the Effect of Socioeconomic Status on Academic Achievement at the School Level. Measurement and Evaluation in Counselling and Development, 43(1), 31-47.

Pajares, F. (1996). Self-Efficacy Beliefs in Academic Settings. Review of Educational Research, 66(4), 543-578.

Palladino, J. (2006). Efficacy Theory. In F. W. English (Ed.), Encyclopedia of Educational Leadership and Administration. (Vol. 1, pp. 327-328). Thousand Oaks, CA: Sage Reference.

Patterson, J. H., Collins, L., & Abbott, G. (2004). A Study of Teacher Resilience in Urban Schools. Journal of Instructional Psychology, 31(1), 3.

Ross, J. A., & Gray, P. (2006). Transformational Leadership and Teacher Commitment to Organizational Values: The mediating effects of collective teacher efficacy. School Effectiveness and School Improvement, 17(2), 179-199.

Schecter, C., & Tschannen-Moran, M. (2006). Teachers' sense of collective efficacy: an international view. International Journal of Educational Management, 20(6), 480-489.

Skaalvik, E. M., & Skaalvik, S. (2007). Dimensions of Teacher Self-Efficacy and Relations With Strain Factors, Perceived Collective Teacher Efficacy, and Teacher Burnout. Journal of Educational Psychology, 99(3), 611-625.

Skaalvik, E. M., & Skaalvik, S. (2010). Teach self-efficacy and teacher burnout: A study of relations. Teaching and Teacher Education, 26, 1059-1069.

Takahashi, S. (2011). Co-constructing efficacy: A "communities of practice" perspective on teachers' efficacy beliefs. Teaching and Teacher Education, 17, 732-741.

Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher Efficacy: Capturing an elusive construct. Teaching and Teacher Education, 17, 783-805.

Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (1998). Teacher Efficacy: Its Meaning and Measure. Review of Educational Research, 68(2), 202-248.

Viel-Ruma, K., Houchins, D., Jolivette, K., & Bension, G. (2010). Efficacy Beliefs of Special Educators: The Relationships among Collective Efficacy, Teacher Self-Efficacy, and Job Satisfaction. Teacher Education and Special Education, 33(3), 225-233.

Woolfolk, A. E., & Hoy, W. K. (1990). Prospective Teachers' Sense of Efficacy and Beliefs About Control. Journal of Educational Psychology, 82(1), 81-91. doi: 10.1037/0022-0663.82.1.81

Woolfolk Hoy, A. (2008). Instruments, 2011, from http://people.ehe.ohio-state.edu/ahoy/research/instruments/

Yilmaz, A. (2009). Self-efficacy Perceptions of Prospective Social Studies Teachers in Relation to History Teaching. Education, 129(3), 506.

Yost, D. S. (2006). Reflection and Self-Efficacy: Enhancing the Retention of Qualified Teachers from a Teacher Education Perspective. [Article]. Teacher Education Quarterly, 33(4), 59-76.

Zellars, K. L., Hochwarter, W. A., Perrewe, P. L., Miles, A. K., & Kiewitz, C. (2001). Beyond Self-Efficacy: Interactive Effects Of Role Conflict And Perceived Collective Efficacy. Journal of Managerial Issues, 13(4), 483-499.