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A Cross-Cultural Comparison of Student Concerns in the Teaching Practicum

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There is general consensus in the literature that students consider the practicum to be a highly valued component of their teacher education degree. Nevertheless, there are wide ranging concerns reported by students related to their teaching practice. This paper reports on these concerns in the form of a cross-cultural comparison of an Australian and a Singaporean sample of students.

Singaporean and Australian students completing their first practicum independently responded to a questionnaire based on the Survey of Practicum Stresses (D'Rozario & Wong, 1996). The psychometric properties of their 7-factor model were tested using the Australian data. This resulted in a 4-factor model, which was confirmed using structural equation procedures. Details of effective but under-employed analysis techniques are presented. This model was employed subsequently to provide cross-cultural comparisons of student concerns in the teaching practicum. Significant differences between the stresses experienced by Singaporean and Australian students point to the need to understand student stress within a cultural context.

Introduction

Stress experienced by students in their practicum has been reported in enough studies to indicate that it is not an isolated phenomenon. In order to maximize the benefits of the teaching practicum for student teachers and for teacher educators, both need to address the concerns of students related to their teaching practice experiences.

MacDonald (1993), along with other researchers into student teacher stress (Campbell-Evans & Maloney, 1995; Capel, 1997; D'Rozario & Wong, 1996; Elkerton, 1984; Morton, Vesco, Williams, & Awender, 1997), confirm that while students regard the teaching practicum as a valuable, if not the most valued, part of their teacher education program, they also consider it to be the most stressful. The significance of identifying sources of student teacher stress lies in the evidence that stress affects teacher behaviour and this in turn reduces classroom effectiveness, particularly in relation to effects of lower pupil achievement and increased levels of pupil anxiety. Elkerton (1984) exhorted teacher educators to identify stresses associated with the practicum and

to assist students to effectively manage these stresses. Morton et al. (1997) pointed to the need to change the nature of the role of teacher and university supervisors from a more directive to a more collaborative one in order to reduce student stress related to evaluation and assessment. Jeans and Forth (1995) also drew attention to the need to bridge the worlds of theory and practice in the design and implementation of pre-service teacher education programs.

MacDonald's (1993) research identified that sources of stress were mainly generated by inconsistencies in the way students were evaluated by teachers, varying expectations of student performance and conformity between teachers, and marked variations in the quality of feedback given to students by their supervising teachers. Gender emerged as an issue in research conducted by D'Rozario and Wong (1996) with student teachers in Singapore, and by Morton et al. (1997). It was reported in both studies that females generally find the practicum experience more stressful than males. At a more general level, Bowers, Eichner, and Sacks (1982) suggested that teacher preparation had not paid enough attention to the psychological 'readiness' of student teachers by concentrating more on methodology and less on preparing students to cope with the inevitable anxieties and stresses associated with students' roles, relationships and responsibilities of teaching.

In the literature on the practicum that reports on student teacher concerns, stresses, and anxieties, only Morton et al. (1997) were found to have taken a cross-cultural focus. They noted that differential reactions to stressors are likely to be a function of variables such as personality, sex, and culture. "Thus male and female student teachers may respond differently to the specific stressors of the teaching experience. Similarly, student teachers in one country may differ in perceived stressors from student teachers in another country" (p. 70). These authors posited that variables including teacher-status, teacher income, teacher demand, and teacher stress could account for differences between cultures in student teachers' cognitive appraisals of, and anxieties about, their school experience. Their cross-cultural research involved a factor analysis of data from Canadian student teachers who completed Hart's Student Teacher Anxiety Scale (STAS) to compare the anxieties of the Canadian students with the British students who provided the data for Hart's original factor analysis. Hart's analysis produced four anxiety factors which were labelled *Evaluation Anxiety*, *Pupil and Professional Concerns*, *Class Control*, and *Teaching Practice Requirements*. Morton et al. (1997) also reported a 4-factor solution; their factors were called *Evaluation Anxiety*, *Pedagogical Anxiety*, *Classroom Management Anxiety*, and *Staff Relations Anxiety*. Both Canadian and British students were most anxious about evaluation. Given the many features common to the two cultures (language, history, curriculum, politics), the observed similarities between the groups were hardly surprising. However, the writers were not prepared for the finding that "evaluation anxiety appears to be paramount regardless of country" (p.72).

During the analysis of data in another study on student teacher stress during the practicum (Murray-Harvey, Slee, Lawson, Silins, Banfield, & Russell, 1999) that employed the Survey of Practicum Stresses (D'Rozario & Wong, 1996), marked differences emerged between the practicum concerns of teacher education students in Singapore and Australia. This led us to research the concerns about the practicum held by students in other different cultural contexts. We asked: (1) How are Singaporean and Australian students' concerns about the practicum conceptualized? and (2) What concerns teacher education students most and least in their practicum? In this study stress was understood to involve the students' perceptions of demands on them (expressed concerns) associated with the teaching practicum.

The Cross-Cultural Context

The Singaporean Context

Compared with Australia, Singapore has a highly centralized system of education. “Schools are for the teaching of a national curriculum to pupils, not for reducing or solving society’s ills, or achieving gender equality...” (Wong, Chiew, Gopinathan, & D’Rozario, 1998, p. 34). Pupils in Singapore’s primary schools are streamed at grades 4 and 6 into different curriculum tracks according to ability. They also sit a national examination for promotion from primary to secondary school. Most schools are coeducational and most are neighbourhood schools. Class sizes are comparatively large (35-44 pupils). Overall, this means that student teachers work in schools that are relatively homogenous. The curriculum is prescribed and timetables are fixed.

The Australian Context

In Australia, despite efforts towards a national curriculum, individualism persists and even within the Australian States, schools vary in the ways they work with curriculum guidelines to reflect their own community’s particular needs. Thus the context in which student teachers practice is likely to be much more variable than it is for Singaporean students. Adaptability and flexibility are regarded by the cooperating teachers as positive attributes of their student teachers. Teachers need to manage a continually changing timetable; pupil movement in and out of the classroom to attend, for example, specialized music, enrichment, specific needs, or language programs; and within the classroom – parent involvement (especially in the early years), and visitors. Class sizes are typically around 30 pupils but are increasing. As in Singapore, primary children generally attend a local, coeducational school.

Wong et al. (1998) suggested that teaching in Singapore is not a high status occupation so attracting capable entrants is difficult. Likewise, in Australia teaching does not command high status. Entrants to Education degrees generally achieve scores comparable with those of the generalist BA and BSc degrees. Similarly in Singapore and Australia, other specialized qualifications “enjoy higher rates of return” (p. 39). Another common feature of the two cultures is the relatively stable political environment. Probably the greatest contrast between the environments in which our student teachers practice their teaching is the more formal, centralized, and regulated system in Singapore.

Teacher Education in Singapore

Students at the National Institute of Education in the Diploma in Education (General) are graduates enrolled in a two-year program that prepares them to teach in primary schools. The BA/BSc with Diploma in Education is a four-year undergraduate program for teaching in both primary and secondary schools. Students in both programs undertake their first practicum for five weeks in a primary school. Assessment is non-graded (Pass/Fail).

Teacher Education in Australia

There are over 35 schools of teacher education in Australia and there is variation among them. Flinders University in Adelaide, South Australia, offers undergraduate and graduate-entry Bachelor of Education degrees. The undergraduate degrees prepare students to teach in primary schools (Reception to Year 7) or in middle schools (upper primary through junior secondary - years 6 to 10). These four-year degrees also admit graduate-entry students. There are also specialist Secondary teaching and Special Education graduate-entry programs. The professional development component of the teacher education program, which is concentrated into the final

two years (four semesters) of the 4-year undergraduate degree represents the full BEd program for graduate students who enter with a completed university degree. Students in all programs receive a non-graded assessment (Satisfactory/Not Yet Satisfactory). The first practicum is a 6-week teaching block in Semester 2 in the same school that students visited for 2 weeks earlier in Semester 1.

The Sample

The Singaporean and Australian samples were similar in many respects. They included students from both the undergraduate 4-year programs and the graduate-entry 2-year programs. Both samples represented students who completed the Survey of Practicum Stresses after their first practicum experience. The Singaporean and Australian samples comprised 397 and 309 students, respectively. In the Singaporean sample there were more females than males (13.6%) and the majority of students were placed in government schools (78.6%). Males were typically under-represented in the Australian sample (26.3%) as well. The majority of students undertook their practicum in government schools (90.4%). All were placed in a primary school with the exception of ten secondary student teachers who were placed in secondary schools. There were no age data for the Singaporean sample. For the Australian sample, students' ages ranged from 20 to 53 years ($M = 26$ years).

The Survey Instrument

The Survey of Practicum Stresses (SPS) was renamed the Perceptions of Teaching questionnaire for the Australian students on request of the University ethics committee. D'Rozario and Wong (1996) developed the SPS to examine areas of stress experienced by first year teacher education students in Singapore. The same 29-item questionnaire was administered to the Australian students. The questionnaire consists of items representing experiences related to the practicum that students may find stressful, for example: managing the class and enforcing discipline; coping with the overall workload; being evaluated by the supervisor; and, fear of failing the practicum. Students' responses indicate how often the experience may have stressed them on a 4-point Likert scale, where 1 = *Never Stressed Me*, 2 = *Stressed Me Some of the Time*, 3 = *Stressed Me Most of the Time*, and 4 = *Stressed Me All the Time*. The possible range of responses to the 29 items on the questionnaire is from a minimum score of 29, indicating that the student experienced no stress on any item (29 x score of 1) to a maximum score of 116, indicating that the student was always stressed (29 x score of 4).

The comparisons presented between Singaporean and Australian students are based on the statistics reported by D'Rozario and Wong (1996). The raw data were not available.

How Are Singaporean and Australian Students' Concerns Conceptualized?

D'Rozario and Wong (1996) used the data from 397 first year student teachers in Singapore to explore the psychometric properties of the SPS. Employing exploratory factor analysis with principal component extraction and Varimax rotation, D'Rozario and Wong evolved a 7-factor model. This then led to the creation of the following seven SPS subscales: *Overall Performance*, *Workload*, *New Colleagues*, *Cooperating Teacher*, *Supervisor*, *Teaching and Managing*, and *Helping*.

To understand how Australian students' concerns are conceptualized, we applied the same factor analytic procedure to the 309 responses collected from Australian teacher education students. The best fitting model that emerged from the analysis of the Australian data (for Practicum 1) was a 4-factor model, not a 7-factor model like in the D'Rozario and Wong's 1996 study. The new factors

(and the resulting subscales) were labelled as *Teaching*, *Preparation*, *University Evaluation*, and *School Evaluation*. Their item composition is given in Table 1. Cronbach alphas for individual subscales indicated good reliabilities (Teaching = .85; Preparation = .77; University Evaluation = .85; School Evaluation = .74). This 4-factor model was subsequently tested applying confirmatory factor analysis via structural equation modelling (SEM), carried out using LISREL 8.12a (Jöreskog & Sörbom, 1993).

Table 1. Item Composition of the 4-factor Model of Australian Student Teachers' Concerns

New Subscale	SPS Item (SPS Subscale^a/SPS Item Number)
Teaching	Managing the class and enforcing discipline (TM/24) Delivering the lesson (TM/19) Managing groupwork (TM/22) Managing the individual seatwork (TM/23) Establishing rapport with pupils (TM/18) Giving appropriate feedback to pupils (TM/21) Marking pupils' written work (WK/28) Teaching mixed ability classes (HL/27) Helping pupils with learning difficulties (HL/25) Helping pupils with emotional/behavioural problems (HL/26) Communicating concepts to pupils (TM/20) Having high expectations of my teaching performance (OP/3)
Preparation	Overall teaching workload (WK/5) Writing detailed lesson plans (WK/15) Managing time (WK/29) Striking balance between practicum and personal commitments (OP/2) Selecting appropriate content for my lessons (WK/16) Preparing resources for my lessons (WK/17) Others expecting me to perform tasks beyond my competency (OP/4) Managing practicum-related assignments (OP/6)
University Evaluation	Being observed by my supervisor (SU/13) Being evaluated by my supervisor (SU/14) Communicating with and relating to my supervisor (SU/12)
School Evaluation	Being observed by my Cooperating teacher(s) (CT/10) Being evaluated by my Cooperating teacher(s) (CT/11) Communicating with/relating to my Cooperating teacher(s) (NC/9) Fear of failing the practicum (OP/1) Communicating with/relating to teachers in the school (NC/8) Communicating with/relating to Principal/Vice-Principal (NC/7)

Note. ^a OP = Overall Performance; WK = Workload; NC = New Colleagues; CT = Cooperating Teacher; SU = Supervisor; TM = Teaching & Managing; HL = Helping.

Structural equation modelling procedures require a sample size large enough to provide reliable parameter estimates (Ullman, 1996). Jöreskog & Sörbom (1993) have suggested a minimum of 5 cases for each estimated parameter in order to obtain stable estimates. To accommodate this guideline, item parcels were constructed to reduce the number of parameters which had to be estimated (West, Finch, & Curran, 1995). An item parcel is the sum or the mean of several items

that are assumed to measure the same construct. In our study, we used parcels made up of item means when testing the 4-factor model. Parcelling enabled us to reduce the number of variables in the analysis from 29 to 15. Because the four factors were hypothesised to covary with one another, there were 36 parameters to estimate (15 loadings, 15 error variances, and 6 factor inter-correlations). The sample size for Practicum 1 was 232, which brought the ratio to about 6 cases per estimated parameter.

When testing the 4-factor model, Maximum Likelihood (ML) estimator was employed. The analysis yielded the following values for selected goodness-of-fit indices: RMSEA (Root Mean Square Error of Approximation) = .051 (.05 or lower is desired); GFI (Goodness of Fit Index) = .92; and CFI (Comparative Fit Index) = .95. All three indices indicate a good degree of fit for the model.

There are some notable similarities and differences in the way students in Singapore and Australia conceptualize their practicum concerns. These differences were identified through separate analyses employed in Singapore and Australia. Singaporean data produced a 7-factor model, identified via exploratory factor analysis. Based on the Australian data, a 4-factor structure was confirmed using structural equation modelling procedures. Since confirmatory factor analysis was not used by D'Rozario and Wong, we were unable to compare the quality of fit of the two models. Assuming that the 7-factor model is a reasonable reflection of the underlying structure inherent in the Singaporean students' responses, the following observations can be made about the two models.

In both countries, students' concerns related to university evaluation of their practicum performance, labelled *University Evaluation* in the Australian model and *Supervisor* in the Singaporean model, were conceptualized identically. This subscale reflects a group of concerns that are particularly robust across dissimilar contexts and cultures. Each of the three remaining Australian subscales is a loose combination of two Singaporean subscales. Thus, in the Australian model: *School Evaluation* combines *New Colleagues* and *Cooperating Teacher*; *Preparation* combines *Overall Performance* and *Workload*; and, *Teaching* combines *Teaching and Managing* and *Helping*. Differences in the structure of these subscales may result from the differences observed in the two countries' cultures and education systems. Observations related to these differences will be drawn out in the discussion.

What Concerns Students Most and Least in the Practicum?

One part of our data analysis was devoted to the item-level comparison between the two countries, in which we compared the frequencies distributions for each of the 29 SPS items. As the Singaporean raw data were not available, the percentages presented in Table 4 of D'Rozario and Wong's (1996) paper were used instead. To make them suitable for our analyses, the percentages were first converted into frequencies. This procedure was carried out on the assumption that in the Singaporean sample, there were no missing data; that is, for each of the 29 items, there were 397 valid responses. These frequencies (excluding the *Not Applicable* category) were then matched with the corresponding Australian data for Practicum 1. Before analysing the combined data set, the two categories indicating high degree of stress (*Most of the Time* and *All the Time*) were combined into a new category, *All/Most of the Time*. The comparisons between the two countries were then carried out on this final set, for each of the 29 items separately.

Table 2 presents percentage distributions for the 29 SPS items, for each country. The percentages show how many students (within each sample) were stressed *never*, *some of the time*, or *most/all of the time*. The corresponding frequencies for each of the 29 items were then submitted to a series

of χ^2 analyses to determine the relationship between country of origin and the degree of perceived stress. The result was a significant link between the two dimensions for 25 of the 29 items. The χ^2 (2)'s for these 25 items ranged from 6.40 ($p < .05$) to 175.80 ($p < .001$). There was no statistically significant difference between the two countries for three concerns: High expectations of teaching performance (χ^2 (2) = 0.04, NS); Delivering the lesson (χ^2 (2) = 1.33; NS); and Managing seatwork (χ^2 (2) = 5.62, NS).

Table 2. Percentage Distributions for the 29 Stress Items (by Country)

Item	Country	Never	Some of the Time	Most/All of the Time
Fear of failing the practicum	Sing ^a	34.8	51.5	13.7
	Aust ^b	49.5	43.6	6.9
Striking a balance between the practicum and personal commitments	Sing	36.8	42.5	20.7
	Aust	26.6	49.3	24.0
Having high expectations of my teaching performance	Sing	9.5	50.1	40.4
	Aust	9.4	50.8	39.7
Others expecting me to perform tasks beyond my current competency	Sing	28.3	50.0	21.7
	Aust	33.9	55.3	10.9
Coping with the overall teaching workload (lesson planning, marking)	Sing	5.1	27.6	67.3
	Aust	12.1	60.9	27.0
Managing practicum-related assignments	Sing	16.8	50.0	33.2
	Aust	26.8	53.0	20.2
Communicating with and relating to Principal/Vice-Principal	Sing	64.2	25.7	10.0
	Aust	76.4	19.9	3.7
Communicating with and relating to teachers in the school	Sing	57.0	36.3	6.7
	Aust	74.8	21.6	3.6
Communicating with and relating to my Cooperating teacher(s)	Sing	51.9	34.0	14.0
	Aust	70.5	26.5	3.0
Being observed by my Cooperating teacher(s)	Sing	18.3	53.0	28.7
	Aust	40.3	52.8	6.9
Being evaluated by my Cooperating teacher(s)	Sing	19.0	51.6	29.4
	Aust	36.2	47.9	15.9
Communicating with and relating to my supervisor	Sing	43.2	34.4	22.4
	Aust	60.9	31.5	7.6
Being observed by my supervisor	Sing	9.2	47.6	43.3
	Aust	24.4	51.8	23.8
Being evaluated by my supervisor	Sing	13.1	40.3	46.6
	Aust	30.7	43.5	25.8
Writing detailed lesson plans	Sing	7.6	29.2	63.2
	Aust	31.1	54.1	14.8
Selecting appropriate content for my lessons	Sing	9.9	53.4	36.7
	Aust	18.3	63.1	18.6
Preparing resources for my lessons (e.g., transparencies, worksheets)	Sing	19.8	48.0	32.2
	Aust	33.7	53.6	12.7
Establishing rapport with pupils	Sing	55.7	35.3	9.0
	Aust	65.1	29.9	4.9
Delivering the lesson	Sing	20.9	61.5	17.6
	Aust	20.2	65.1	14.7

Table 2. Percentage Distributions for the 29 Stress Items (by Country) (continued)

Item	Country	Never	Some of the Time	Most/All of the Time
Communicating concepts to pupils	Sing	17.8	62.8	19.3
	Aust	28.0	61.2	10.7
Giving appropriate feedback to pupils	Sing	33.5	55.2	11.3
	Aust	47.9	43.6	8.5
Managing groupwork	Sing	16.5	51.7	31.8
	Aust	36.2	52.1	11.7
Managing the individual seatwork	Sing	47.3	45.4	7.3
	Aust	54.7	41.3	4.0
Managing the class and enforcing discipline	Sing	15.4	46.1	38.5
	Aust	14.9	64.4	20.7
Helping pupils with learning difficulties	Sing	17.6	50.7	31.8
	Aust	36.3	53.0	10.7
Helping pupils with emotional/behavioural problems	Sing	23.5	50.1	26.4
	Aust	23.7	58.0	18.3
Teaching mixed ability classes	Sing	14.4	53.4	32.2
	Aust	29.2	56.8	14.0
Marking pupils' written work	Sing	22.0	43.8	34.2
	Aust	60.6	31.5	7.9
Managing time	Sing	14.4	49.6	35.9
	Aust	25.0	52.3	22.7

Note. ^aSingaporean sample $N = 340-397$; ^bAustralian sample: $N = 287-309$.

A further analysis employing a series of one-sample t tests for each of the 29 SPS items produced an additional significant difference between the two samples for the item Managing seatwork ($M_{Aust} = 1.49$, $M_{Sing} = 1.61$, $t(299) = -3.51$, $p < .001$). Furthermore, as expected, there were 25 items for which Singaporean students reported greater level of concern than Australian students. A notable difference between the groups was the high level of concern indicated by Australian students in striking a balance between the practicum and personal commitments. This was a significantly greater concern for Australian students than for Singaporean students and this was the only item in the survey on which there was significantly greater concern reported by Australian students ($M_{Aust} = 2.05$, $M_{Sing} = 1.91$, $t(303) = 2.79$, $p < .01$).

An inspection of Table 3 reveals that of most concern to Singaporean students were Workload and Lesson Planning, items that were ranked as stressful *most* or *all of the time* by over 60% of this group. Workload was regarded as a stressful activity for the Australian students also, ranked as the second highest concern. For the Australian sample High Expectations of Teaching Performance was the concern held by the highest percentage of students *most/all of the time*. For both groups, Being Observed and Evaluated by their University Supervisor, Managing Time, Managing and Enforcing Discipline, and Managing Practicum-Related Assignments, were all reported as events of concern.

Of least concern to Singaporean students were the following items: Communicating With and Relating to the Principal/Vice-Principal, Communicating With and Relating to Teachers in the School, and Establishing Rapport With Students. Over half the sample reported that these events never stressed them. Other events that generated low levels of concern were Teaching Mixed Ability Classes, Communicating With and Relating to the Cooperating Teacher, and Dealing With

Pupils' Learning Difficulties. Similarly for Australian student teachers, least concern was reported for Relating to the Principal/Vice-Principal, and to Teachers in the School. Among the other events generating low levels of concern were Relating to their Cooperating Teacher, Establishing Rapport With Pupils, and Relating to the Supervisor.

Table 3. Items of Most and Least Concern to Singaporean and Australian Students

Singaporean Students		Australian Students	
Of Most Concern:	%	Of Most Concern:	%
1 Coping with the overall teaching workload	67.3	Having high expectations of my teaching performance	39.7
2 Writing detailed lesson plans	63.2	Coping with the overall teaching workload	27.0
3 Being evaluated by my supervisor	46.6	Being evaluated by my supervisor	25.8
4 Being observed by my supervisor	43.3	Striking a balance between the practicum and personal commitments (e.g., family)	24.0
5 Having high expectations of my teaching performance	40.4	Being observed by my supervisor	23.8
6 Managing the class and enforcing discipline	38.5	Managing time	22.7
7 Selecting appropriate content for my lessons	36.7	Managing the class and enforcing discipline	20.7
8 Managing time	35.9	Managing practicum-related assignments	20.2
9 Marking pupils' written work	34.2	Selecting appropriate content for my lessons	18.6
10 Managing practicum-related assignments	33.2	Helping pupils with emotional/behavioural problems	18.3
Of Least Concern:	%	Of Least Concern:	%
1 Communicating with and relating to Principal/Vice-Principal	64.2	Communicating with and relating to Principal/Vice-Principal	76.4
2 Communicating with and relating to teachers in the school	57.0	Communicating with and relating to teachers in the school	74.8
3 Establishing rapport with pupils	55.7	Communicating with and relating to my Cooperating teacher(s)	70.5
4 Teaching mixed ability classes	53.4	Establishing rapport with pupils	65.1
5 Communicating with and relating to my Cooperating teacher(s)	51.9	Communicating with and relating to my supervisor	60.9
6 Helping pupils with learning difficulties	50.7	Marking pupils' written work	60.6
7 Helping pupils with emotional/behavioural problems	50.1	Managing the individual seatwork	54.7
8 Managing time	49.6	Fear of failing the practicum	49.5
9 Managing the individual seatwork	47.3	Giving appropriate feedback to pupils	47.9
10 Marking pupils' written work	43.8	Being observed by my Cooperating teacher(s)	40.3

At least half the Singaporean students experienced stress at least some of the time for 25 of the 29 practicum-related experiences identified in the survey. For the Australian sample, at least half the students reported being stressed at least some of the time for 22 of the 29 practicum-related experiences.

In broad terms, events involving interpersonal interactions within the school setting were of least concern to both groups of students. The events that generally caused concern were associated with preparation tasks and with being observed and evaluated. The Singaporean and Australian findings support those of Morton et al. (1997) who used Hart's Student Teacher Anxiety Scale (STAS). In their study, Canadian students' anxiety related to being evaluated supports both the Singaporean and the Australian student concerns and, according to Morton et al., is consistent with Hart's finding of student teachers in Great Britain where evaluation anxiety received the highest ratings. (see Morton et al., 1997, p. 70)

Gender Differences

Consistent with the overall finding of significantly greater stress reported by Singaporean students than Australian students, the mean scores on each scale for both males and females were markedly higher for the Singaporean sample than for the Australian sample. Refer to Table 4 for a summary of the comparisons across the SPS subscales.

Table 4. Means and Standard Deviations for the Seven Scales (by Gender and Country)

Scale		Female		Male	
		Australia	Singapore	Australia	Singapore
Overall Performance	<i>M</i> (<i>SD</i>)	10.02 (2.31)	14.59 (2.95)	9.08 (1.87)	14.35 (2.80)
Workload	<i>M</i> (<i>SD</i>)	11.60 (3.05)	20.77 (3.65)	11.16 (2.55)	20.76 (4.88)
New Colleagues	<i>M</i> (<i>SD</i>)	3.99 (1.41)	7.54 (1.87)	3.72 (1.04)	7.04 (1.86)
Cooperating Teacher	<i>M</i> (<i>SD</i>)	3.58 (1.23)	6.37 (1.54)	3.18 (1.26)	6.06 (1.63)
Supervisor	<i>M</i> (<i>SD</i>)	5.69 (2.04)	9.93 (2.53)	5.10 (2.08)	9.72 (2.50)
Teaching & Managing	<i>M</i> (<i>SD</i>)	12.44 (2.98)	20.50 (3.70)	11.56 (2.79)	19.70 (4.56)
Helping	<i>M</i> (<i>SD</i>)	5.67 (1.79)	9.11 (2.45)	5.51 (1.43)	8.56 (2.03)

Based on the means for males and females presented for D'Rozario and Wong's seven subscales of the SPS, Singaporean males reported less stress than females on all seven subscales. In the Singaporean study (based on their 7-factor model which did not permit direct comparison with the Australian data), the results showed significantly higher levels of stress for females than for males on two subscales: Overall Performance and Workload ($p < 0.05$). The findings from Singapore related to gender support those of Morton et al. (1997) who found that females reported higher anxiety ratings than males.

In order to compare this result, means were calculated for the Australian sample on the same seven SPS subscales. While Australian males, like their Singaporean counterparts, reported less stress

than females, no significant differences were found between the Australian males' and females' levels of concern. This result for Australian students is consistent with analysis of data involving gender on another cohort of students (Murray-Harvey et al., 1999) using the subscales derived from the 4-factor model.

Discussion

How are Singaporean and Australian students' concerns about the practicum conceptualized?

The Survey of Practicum Stresses SPS (D'Rozario & Wong, 1996) was used originally to examine areas of stress experienced by first-year Singaporean teacher education students and was the instrument selected for our own research purposes. A preliminary investigation of the psychometric properties of D'Rozario & Wong's (1996) Survey of Practicum Stresses did not find support in the South Australian data for their 7-factor model. Further analysis found support for a 4-factor model.

We surmise that the different models reflect differences in the way Australian and Singaporean students conceptualize their role as teacher. In Singapore, the emphasis on curriculum prescription, national exams, and large classes suggests an expectation that the teacher's role is to focus student learning on academic achievement; teaching conceptualized quite clearly as instruction. In contrast, beyond developing the intellectual capacities of their students, Australian teachers find themselves accountable for the emotional, physical and mental well-being of their students. Within a very varied Australian education system, teachers also are increasingly expected to be responsive to their school community's expectations. In Australia, it would be difficult to separate out the teaching role from the helping role. This would explain why Australian students conceptualize their teaching role as both teaching and helping and why Singaporean student teachers differentiate between these two roles. This is evident in the way the Australian subscale *Teaching* combines the Singaporean *Helping* items with their *Teaching and Managing* items to form an integrated subscale.

The Australian model also integrates students' relationship concerns with evaluation concerns in the school context as well as in the university context. This integration is consistent with the integration that occurs for both the Australian *University Evaluation* and Singaporean *Supervisor* subscales. These subscales combine the supervisor relationship concerns with supervisor's evaluation concerns. However, the Singaporean model for the school evaluation context, separates out the colleagues' relationships concerns, resulting in two subscales, namely, *Cooperating Teacher* and *New Colleagues*. These two subscales indicate that Singaporean concerns are strongly associated with school evaluation issues as well as relationships with school staff and the principal. On the other hand, Australian students' concerns in the school context are mostly associated with the cooperating teachers' observation and evaluation of them. Teacher and principal relationships were very much lesser concerns for Australian teacher education students. We suggest that a greater relational distance in Singapore between principals and students, teachers and principals, and students and teachers is reflected in the differences between the factors produced in the two models.

Another difference in the underlying structure of Singaporean and Australian student responses worth noting is that of the prevalent concerns of the Australian students in *Preparation*. Compared with the prevalent concerns of the Singaporean students in *Overall Performance* and *Workload*, identified as their current level of competence, preparing resources for lessons and writing detailed lesson plans, Australian students include time management and balance concerns.

The latter refers to balancing the demands on their time of the practicum with the demands of their family or personal lives. For Australian students competence and preparing resources for lessons are secondary concerns to the pressures of workload, detailed lesson plan writing, time and balance demands. Again, we believe that such differences reflect the cultural and education system differences in the two countries, particularly, the strong focus of the Singaporean education system on content, exams, and achieving results.

What concerns Singaporean and Australian teacher education students most and least in their practicum?

Based on item analyses of the percentage of students in the two samples who reported the extent to which they were stressed by a range of practicum experiences, Singaporean students appear to experience significantly higher levels of stress on practicum than Australian students in most areas. However, in both contexts students reported that they were most concerned by much the same events – coping with the workload, high personal expectations of performance, and being observed and evaluated by their supervisor. In all these cases a significantly higher percentage of Singaporean students reported being stressed most/all of the time. Among the items of most concern for Australian students (but not for Singaporean students) was striking a balance between the practicum and personal commitments. In Australia, the students who now comprise the student population bring with them varied life experiences and a range of other competing interests, including work and family responsibilities that need to be balanced with achieving their goal of becoming teachers. The different student profile in the two countries is likely to account for this.

The events that concerned students least were also similar for both student samples. Communicating and Relating to the Principal/Vice-Principal, the student's Cooperating Teacher, Other Teachers in the School, and Establishing Rapport With Pupils, were all items that the highest percentage of Singaporean and Australian students identified as having never stressed them. In summary, preparation and evaluation items generated most stress while interpersonal relationship items were the least stressful in both cultural contexts.

Why do Singaporean students report higher levels of stress?

We suspect that Singaporean students' higher overall levels of concern reflect their more examination-oriented culture. It is also likely that the level of formality in Singapore that exists in relationships between teachers and pupils, and between student teachers and their supervisors, may provide less room for risk-taking and increase performance anxiety. In Australia, conceptualizing helping as part of a teacher's role may actually permit the development of more informal, closer relationships between students and their cooperating teachers (and supervisors), and so reduce the interpersonal concerns that are clearly much greater in Singapore. Similarly, pressures to meet highly structured curriculum expectations and to work within a rigid timetable may partly explain the generally higher levels of concern of student teachers in Singapore. The different cultural contexts may also help to explain differences in the finding of the Singaporean and Australian research between male and female student teachers. D'Rozario and Wong (1996) asked, in relation to their Singaporean students: "Why should female student teachers experience more stress? Could it be that they lack self-confidence? Could it be they have higher personal expectations of themselves? Do they perceive that others have higher expectations of them being 'good' teachers as teaching has traditionally been associated with their gender?" (p. 13). While the same questions may be asked of Australian females, we suggest that the non-significant finding for the Australian sample is a consequence of the impact of policies of affirmative action and anti-

discrimination based on gender. The shift towards more gender equality, in the professional arena at least, may help explain the Australian result.

Conclusion

The dearth of literature with a cross-cultural focus is surprising given the increasing mobility of students and teachers between countries, and the growing connections being forged between teacher educators world wide who are developing a shared interest in improving teacher education practices. This study offered the opportunity to contribute to cross-cultural knowledge in teacher education.

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