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## ARE BEGINNING TEACHERS WITH A SECOND DEGREE AT A HIGHER RISK OF EARLY CAREER BURNOUT?

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### Abstract

This study investigated the impact that holding a second university degree has on levels of burnout that is reported by beginning teachers during their first year of employment. This research formed part of an ongoing investigation that aims to identify important elements relating to teacher well-being during the transition from university to a teaching career. One hundred and twenty three teachers responded to a mail survey six weeks after they commenced full-time teaching (T1) and again six months later (T2). On both occasions the survey included the Educators Survey version of the Maslach Burnout Inventory (MBI: Maslach, Jackson, & Leiter, 1996). Forty five percent of respondents indicated that they held a second university degree in addition to their Bachelor of Education qualification when they registered as a teacher. A between-subjects MANOVA indicated that there were no significant differences in burnout scores between those respondents holding an additional university degree and those who only held the Bachelor of Education. The results suggest that holding a second degree is not associated with the manifestation of debilitating symptoms which, over time, lead to significant reductions in the health and well-being of individuals who experience this phenomenon (Cordes & Dougherty, 1993; Kahill, 1988). Thirdly, the detrimental impact that burnout has upon individual workers significantly

Education degree at T1. However, at T2, a similar analysis indicated that the group of respondents with a second degree had significantly higher burnout levels on two of the three MBI dimensions. These results suggest systematic differences may exist between the two categories of graduates and that these differences may impact on the rate at which burnout develops during the first year of a teaching career.

The most widely accepted definition of burnout stems from Maslach's assertion that burnout is "...a three dimensional syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that occurs among individuals who work with people in some helping capacity" (Maslach, 1982, p. 3). Based on a substantial research history spanning the past three decades, several major conclusions about burnout are well accepted. Firstly, burnout, as the chronic end state of an unadaptive response to persistent (job) stress, is an enduring condition for the individual who experiences burnout (Maslach & Goldberg, 1998). Secondly, burnout is directly impacts on the quality of service that is delivered by the organisation employing workers who are burnt out (Cherniss, 1995; Maslach & Leiter, 1997; Maslach & Goldberg, 1998). As further evidence underscoring the significance of these findings for human service workers and the organisations that employ them, burnout is

now accepted as a serious health and safety concern in a number of human service professions including teachers.

Although the burnout phenomenon has been studied across a wide range of professions, cultures and time frames over the past thirty years, substantial gaps in our knowledge still exist about some of the conditions that can give rise to burnout and how it specifically develops. Whilst it is fairly well accepted that work climate factors, such as a persistently high and unremitting work pressure, lack of social support and work resources, poor role clarity and role conflict will substantially contribute to elevated burnout levels in any work group, there is less certainty about the contribution that other factors may make to elevating or ameliorating burnout. For example, research investigating the contribution that personality traits may make to the explanation of burnout has only been reported relatively recently and there is considerable work to be done to integrate personality into a coherent theory of burnout (Toppinen-Tanner, Kalimo, & Mutanen, 2002). Similarly the effect of a mismatch between an individual's career aspirations and the reality of work within a profession has been cited as a root cause of burnout (see for example Freudenberger & Richelson, 1980 or Friedman & Faber, 1992) yet further research will be required to firmly establish this hypothesis as fact. In highlighting some of the gaps in the burnout research conducted to date, Toppinen-Tanner et al. (2002) recently proposed that burnout researchers should turn their attention to human service workers who were commencing their careers rather than continue to focus on populations in which burnout has already been established. These authors noted that relatively few studies have undertaken longitudinal investigations to determine the course of burnout, and rarely have populations been studied from the commencement of their career.

While burnout within the teaching

profession has frequently been investigated and the phenomenon has been well recognised as being problematic for teachers globally, (Cherniss, 1995; Pearce & Molloy, 1990) research involving the teaching profession has also predominantly focused on established populations where burnout could be expected to have been well developed when the investigation commenced (see Elkerton, 1984, Fimian, 1987, and Gold Roth, Wright, & Michael, 1991, for exceptions). In contrast to the prevailing research focus on established teachers, there is widespread recognition of high turnover rates for beginning teachers within the literature, with some researchers reporting turnover as high as 20 to 25% within the first three to five years of employment (Gold, et al., 1991). Given such high early career turnover rates, it can be argued that the failure to specifically focus on beginning teacher cohorts in large scale epidemiological studies of teacher burnout may have underestimated the phenomenon by excluding consideration of teachers who exit their career at an early stage due to burnout. Furthermore, where investigations have been concerned with determining the antecedents of teacher burnout, failure to consider the views of beginning teachers independently of established teachers may have failed to identify risk factors that are most prominent at the commencement of a teaching career. For example, if significant numbers of beginning teachers who perceived their pre-service training in some way as inadequate or problematic go on to leave the profession within the first three years of service, potentially important observations are likely to be obscured by research that does not take a beginning career focus.

Some of the earliest research has hypothesised that burnout arises from chronic disappointment arising from the recognition by the worker that their hopes and aspirations for the career they have chosen and worked to enter were not realistic or will not be realised

(Fredenberger & Richelson, 1980). Bearing close resemblance to Roger's existentialist view that distress arises from maintaining substantial mismatches between actual and ideal self image, this view of burnout has found support in the literature describing burnout in teachers (Friedman, 2000). If it is the case that teacher burnout develops, as Friedman asserts, as a result of "the shattered dreams of idealistic workers" (p. 595), perhaps pre-service training directly influences the accuracy of work perceptions that graduates hold when they commence their chosen profession. For example, graduands who have studied in other disciplines such as music, science or economics prior to undertaking their teacher training may, based on their own learning experiences, develop different career expectations to those graduands who complete a four year bachelor of education program that is primarily focused on teaching.

Adam's (1965) equity theory also predicts that differing expectations will arise from different pre-service training programs. This theory postulates that people look to achieve equity with respect to the return on their investments of time and effort. Therefore, equity theory would predict graduands who put more work into achieving their entry level qualification(s) will have higher expectations of their career than graduands who have put less work into achieving their entry level qualifications. This prediction is significant for investigations into burnout, as higher expectations have been linked to higher burnout levels (Freudenberger & Richelson, 1980).

To summarize therefore, while sound arguments can be made for why beginning teachers who have undertaken differing university preparations might develop differing pre-service expectations about teaching and this in turn may then give rise to differing rates of burnout, this hypothesis is yet to be tested. The present study will address this hypothesis and

investigate whether differing rates of burnout do arise in beginning teachers with different pre-service backgrounds. Based on the observation that graduands that hold two degrees upon receiving their teacher qualifications and commencing work as teachers have, on average, undertaken a different pre-service training regime than graduands who hold only one degree, the present study has hypothesised that beginning teachers holding two or more university degrees will, on average, develop burnout at a different rate to beginning teachers who only hold the Bachelor of Education at the commencement of their career.

## **Method**

### *Participants*

Participants were teachers registered in the Australian state of Queensland and working as teachers in the year following the completion of tertiary studies in education at one of three Queensland universities. The sample was compiled from public records available through the Queensland Board of Teacher Registration. When first surveyed (T1), 142 teachers responded to the survey described below. Six months later (T2), the same teachers were again sent surveys. Nineteen of the respondents who completed the survey at T1 and who either failed to return the second survey or were uncontactable at T2 were discarded from this analysis. Therefore respondent attrition rate at T2 was 13.4%. A series of *t*-tests and chi-square analyses concluded that no attrition bias was apparent for those nineteen respondents who dropped out between the initial and subsequent surveys of teacher burnout.

### *Instruments*

Burnout was measured at both T1 and T2 by using the Educator Survey version of the Maslach Burnout Inventory (MBI; Maslach, Jackson, & Leiter, 1996). This is a 22 item self-report instrument described in the literature as "the most widely used

operationalization of burnout” (Lee & Ashforth, 1996, p. 124). The MBI consists of three subscales: emotional exhaustion (EE: sample item, “I feel emotionally drained from my work”), depersonalisation (DP: “I feel I treat some students as if they were impersonal objects”), and personal accomplishment (PA: “I feel I am positively influencing other people’s lives through my work”). Participants respond on a seven-point frequency rating scale, ranging from “never” (0) to “every day” (6). High scores on the EE and DP subscales and low scores on the PA subscale are characteristic of burnout. Reliability coefficients published in the technical manual are .90 for EE, .79 for DP, and .71 for PA (Maslach et al., 1996). In the present study, at T1 the corresponding coefficient alpha scores were .89 for EE, .68 for DP, and .86 for PA, and at T2 were .92 for EE, .79 for DP, and .88 for PA.

In addition to the above instrument, respondents were also asked about their age, gender, marital status, work location, length of time they had taught, whether they had a mentor and what tertiary qualifications they held when they commenced work as a teacher.

#### *Procedure*

Initially a sample of more than 600 Queensland teacher graduates was contacted via mail to secure written consent to participate in a longitudinal study into beginning teacher well-being to be conducted over the following two years of professional employment. As a result of this recruitment exercise, survey booklets which included the MBI (Maslach, et al., 1996), and a questionnaire asking respondents for demographic information, including details of all tertiary qualifications held were then forwarded directly to the 180 individuals who had agreed to participate and who also satisfied the criterion that they were currently employed as a teacher. Reply paid envelopes were included with the survey so that completed forms could be returned

directly to the researcher. Six months later all 142 teachers who responded to the initial survey at T1 were forwarded another survey booklet containing the MBI.

## **Results**

### *Summary Data*

At T1, the average age of the beginning teacher sample was 26.25 years ( $SD = 7.21$ ), and the mean duration of employment as a teacher was, as expected, only 7.37 weeks ( $SD = 4.46$ ). At T2 respondents had been employed for an average of 8.34 months ( $SD = 1.16$ ) and estimated working an average of 45 hours ( $SD = 11.30$ ) each week. One hundred and two (83%) respondents were female, a higher proportion than recent National and Queensland estimates of overall female teacher frequencies of 65% and 59% respectively (Dempster, Sim, Beere, & Logan, 2000). Thirty four percent (34%) of the respondents were married, and all reported graduating from one of three Queensland universities in 2001. Forty one percent (41%) of respondents were primary school teachers, forty seven percent (47%) secondary teachers and twelve percent (12%) early childhood teachers. The teaching qualification held by all respondents was the Bachelor of Education. In addition to this teaching qualification 45% (i.e., 55 respondents) also held a second university degree.

Summary scores for the total sample of beginning teachers on the MBI at T1 and T2 are presented in Table 1. Using one sample  $t$ -tests, mean beginning teacher MBI subscale scores were compared with normative data for teachers reported by Maslach, et al. (1996) developed from studies of American teachers ( $n = 4,163$ ). At T1 the mean beginning teacher subscale score for Emotional Exhaustion was not significantly different from the Maslach norm,  $t(122) = 0.86, p > .05$ , however at T2 the mean beginning teacher subscale score for Emotional Exhaustion was higher than this norm,  $t(122) = 3.67, p < .001$ . On the

two other burnout dimensions, Depersonalization and Personal Accomplishment, mean scores signified significantly lower burnout levels than the norms set out in the technical manual of the MBI,  $t(119) = 8.82, p < .001$  and  $t(120) = 6.13, p < .001$  respectively for T1 and ,  $t(121) = 6.04, p < .001$  and  $t(122) = 4.80, p < .001$  respectively for T2. As some authors have suggested that norms for Australian teachers systematically differ from norms for overseas teachers, that is Australian teachers are believed to report significantly lower frequencies of depersonalizing behaviour towards their students, the results of the present investigation were also compared to a 1990 investigation into burnout in Victorian teachers (Pierce & Molloy, 1990). Although conducted more than 12 years prior to the present investigation, this Victorian study is one of the most recent that has published the results of a large-scale investigation into teacher burnout in Australia. It was notable therefore that while mean Emotional Exhaustion and Depersonalization scores for the beginning teachers of this study were not significantly

different to the large sample ( $N = 750$ ) of Victorian teachers at T1, by T2, mean Emotional Exhaustion and Depersonalization scores for the beginning teachers of the present investigation were significantly higher, signifying higher burnout in beginning teachers, than the level for an undifferentiated sample of Victorian teachers surveyed 12 years before,  $t(122) = 3.01, p < .001$ , and  $t(119) = 2.02, p < .05$  respectively. In contrast, at both T1 and T2, beginning teachers reported significantly higher levels of Personal Accomplishment, corresponding to lower burnout, that the corresponding mean for the Victorian teachers,  $t(120) = 5.47, p < .001$ , and  $t(122) = 4.15, p < .001$ . This pattern of results, that is high and increasing levels of Emotional Exhaustion coupled with low to moderate but increasing frequencies of depersonalizing behaviour towards students and relatively high and stable levels of Personal Accomplishment, is consistent with the interpretation that burnout was developing in the sample of beginning teachers during their first year of employment.

**Table 1** *Burnout summary scores for first year teachers after seven weeks employment (T1) and after eight months employment (T2) as teachers.*

	At 7 weeks (T1)		At 8 Months (T2)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<b>MBI Subscales</b>				
Emotional Exhaustion	22.15	11.66	25.29	12.23
Depersonalization	6.33	5.81	7.35	6.68
Personal Accomplishment	37.64	7.37	36.78	7.48

*Qualifications and Burnout*

First, a series of comparisons employing chi-square tests and *t*-tests were conducted to determine if the two groups of beginning teachers, those who held a second degree in addition to the Bachelor of Education and those that did not, differed on any of the demographic measures investigated by the

present study. No significant differences were observed between these two groups on the demographic variables investigated by the present study. Table 2 lists the demographic information for both sub-groups of teachers.

**Table 2** *Summary of beginning teacher demographics for two cohorts of beginning teachers.*

	B. Ed only Group ( <i>n</i> = 68)			Teachers with Two University Degrees ( <i>n</i> = 55)		
	%	<i>M</i>	<i>SD</i>	%	<i>M</i>	<i>SD</i>
Percentage Female	88	-	-	76	-	-
Percentage Married	32	-	-	35	-	-
Rural Teaching Location	21	-	-	24	-	-
Has a Mentor	50	-	-	40	-	-
Age last birthday (T1)	-	25.84	7.33	-	26.67	7.08
Weeks Employed (T1)	-	6.97	4.12	-	7.85	4.84
Months Employed (T2)	-	8.43	1.00	-	8.29	1.33

Second, to investigate the hypothesis that beginning teachers with two or more university degrees would develop burnout at a different rate than beginning teachers with a single degree at the commencement of their career, two 2 x 1 between-subjects multivariate analyses of variance were performed. In the first analysis, the MBI subscale scores (EE, DP and PA) measured at T1 acted as dependent variables, and the two levels of pre-service qualifications (B. Ed only and the B. Ed plus any additional degree condition) acted as the independent variable. This analysis was then repeated for the MBI subscale scores measured at T2.

For the T1 analysis a significant multivariate effect was not identified,  $F(3, 114) = 0.17, p > .05$ . For the T2 analysis a

significant multivariate effect was found,  $F(3, 118) = 3.88, p < .05$ . Subsequent univariate analyses of variance investigating the T2 data indicated significant main effects for qualification level for two of the three dependent variables. Teachers with a second degree were, after eight months work, reporting significantly greater feelings of Emotional Exhaustion and greater frequencies of Depersonalization towards their students than teachers with a single teaching qualification. Although approaching significance, the lower level of Personal Accomplishment reported by teachers with two university degrees compared to the single qualification cohort was not significant ( $p = .054$ ). Summary data are presented in table 3.

**Table 3** *Burnout comparisons between beginning teachers cohorts differentiated by number of qualifications held at commencement of teaching career, two-tailed significance.*

	B. Ed only Group ( <i>n</i> = 68)		Two Degrees Group ( <i>n</i> = 55)		Test of Differences <i>F</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
<b>MBI Subscales</b>					
Time 1					
Emotional Exhaustion	20.37	12.42	24.36	10.33	3.32
Depersonalization	5.36	5.50	7.55	6.01	3.42
Pers. Accomplishment	38.61	7.09	36.44	7.61	3.19
Time 2					
Emotional Exhaustion	22.13	12.24	29.20	11.14	11.40**
Depersonalization	6.00	6.11	9.00	7.01	6.37*
Pers. Accomplishment	37.97	7.27	35.31	7.54	3.80

Note. \*  $p < .05$ . \*\*  $p < .01$ .

### Discussion

The present study demonstrated that over the first eight months of their employment, burnout has developed at different rates for the two groups of teachers investigated. Despite reporting statistically equivalent levels of burnout after seven weeks of employment as teachers, beginning teachers who held the 4-year Bachelor of Education degree and no other tertiary qualification, reported significantly lower burnout levels on two core dimensions of burnout, Emotional Exhaustion and Depersonalization. Furthermore, on the remaining burnout dimension, Personal Accomplishment, a strong trend towards lower burnout in the Bachelor of Education only cohort was also found. The observed differences cannot be adequately accounted for by age, gender, marital status, length of service, or other demographic differences investigated by the present study because preliminary between-group comparisons across these demographic variables indicated statistical equivalence. Therefore, taken together, these findings in a relatively small sample of beginning teachers suggest the existence of systematic differences between the two

categories of graduates investigated by the present study such that when the two groups interface with the work environment during their first year of employment burnout develops at different rates. Clearly this conclusion will require independent replications to determine its voracity, however if proven, future investigations will also be required to determine why burnout develops at different rates for teachers depending the type of qualifications held at the time of their employment.

There could be several explanations for the results of the present study, some of which will be suggested in the following discussion. First, the finding of higher burnout levels in beginning teachers holding a second degree is consistent with Adam's (1965) equity theory. Equity theory would propose that the level of rewards that a worker receives from their job is expected to match the level of effort that the worker puts into preparing for and undertaking their work. Therefore graduands who have been awarded two degrees in the course of gaining qualifications to enter a teaching career may consider that they have invested



greater time and effort in preparing for their professional working life and as a result may hold higher expectations about the level of rewards that their relatively greater efforts should bring. For this cohort of beginning teachers, these higher expectations may have been harder to match within the classroom than for graduands whose level of effort in becoming a teacher has been less. Higher burnout levels would therefore be a consequence of greater unmet work expectations in this group.

Another potential explanation for the findings of the present study arises from the notion of differences in pre-service training programs that the two groups of teachers have passed through. Clearly where a student has already studied, or is concurrently studying, to become a specialist in an area of interest and strength in a field *other than* teaching before going on to study how to teach others about this field is quite a different scenario to a student studying how to be a teacher as their primary interest and strength. Therefore, when an interest in teaching arises either concurrently with or after study in another field such as science or music, the graduand may as a result of study in two degrees, become aligned with and seek rewards from the teaching area of specialisation rather than the teaching process itself. Such teachers may be apt to experience disappointment when teaching others about their area of strength and interest whilst students are less interested in this subject or whilst students may not be picking-up on the teacher's strength and area of interest at the same rate at which the teacher would expect based upon the teacher's own learning experiences. Again disappointment and lack of rewards are hypothesised to lead to greater rates of burnout for such teachers.

Finally, it is noted that teacher training for graduates can be quite condensed relative to the training of undergraduates. Typically graduates will have similar access to the

same practicum and foundation studies in education as undergraduate students in education, however they generally have less access to elective subjects in education and this might result in reduced preparedness for those teachers who have gained their teaching qualification as a post-graduate student. Lack of preparedness may then be instrumental in causing higher stress levels, which, if sustained, progressively results in higher levels of burnout.

No doubt there are other potential explanations that could account for the results of the present study, however there are also a number of limitations associated with the present investigation and therefore several suggestions for future research. Of note is the question of how representative the sample of teachers investigated in the present study is of beginning teachers in general. Clearly the pool of teachers that was initially invited to participate in this research project may not have been representative of all Queensland graduates, being as it was based upon publicly available graduation lists and newspaper result lists pertaining to only three Queensland universities. Students from other Queensland universities, students who elected not to attend their graduation ceremony or students who had chosen to suppress the publication of their results would not have been invited to participate. Furthermore, graduands in 2001 who had not registered with the Queensland Board of Teacher Registration by February 2002 would also not have been invited to participate in the present study. Finally, one cannot discount the possibility that those teachers who agreed to participate may have systematically differed from those who declined to be involved in the study for reasons unknown. To help overcome the potential selection bias that arises from this approach it is suggested, therefore, that a future replication should seek to have the active cooperation and visible support of the various teacher employer groups. Assistance to access

random samples of beginning teachers would be particularly useful.

Another limitation of the present study that will need to be addressed by follow-up studies focused on beginning teachers is the present study's small sample size. To have the requisite power to conduct more in-depth analyses warranted by the complex relationships between work and family support, marital status, gender, personality, work pressure and the development of burnout, subsequent investigations will need to have much larger sample sizes to conduct sophisticated multivariate analyses that take account of these variables simultaneously.

In conclusion, the present study has presented findings that suggest that burnout may develop at different rates for teachers entering the profession with two degrees in comparison to teachers who enter teaching after a 4-year program of undergraduate training. Research to confirm these findings and to thoroughly investigate this phenomenon in beginning teachers is called for, particularly as graduate teaching qualifications continue to be a popular way of entering the teaching profession.

## References

- Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), Advances in Experimental Social Psychology (pp. 267-299). NY: Academic Press.
- Cherniss, C. (1995). Beyond burnout: Helping teachers, nurses, therapists & lawyers recover from stress & disillusionment. NY: Routledge.
- Cordes, C. L., & Dougherty, T. W. (1993). A review and integration of research on job burnout. Academy of Management Review, 16, 621-658.
- Dempster, N., Sim, C., Beere, D., & Logan, L. (2000). Teachers in Australian schools: a report from the 1999 national survey (Final Report). Canberra, ACT: Australian College of Education.
- Elkerton, C. A. (1984). An investigation of stress experienced by beginning teachers during practice teaching. South African Journal of Education, 4(3), 97-102.
- Fimian, M. J., & Blanton, L. P. (1987). Stress, burnout, and role problems among teacher trainees and first-year teachers. Journal of Occupational Behaviour, 8, 157-165.
- Friedman, I. A. (2000). Burnout in teachers: Shattered dreams of impeccable professional performance. JCLP, 56(5), 595-606.
- Freudenberger, H. J., & Richelson, G. (1980). The high cost of achievement. Garden City, NY: Doubleday.
- Friedman, I. A., & Faber, B. A. (1992). Professional self-concept as a predictor of burnout. Journal of Educational Research, 86(1), 28-35.
- Gold, Y., Roth, R. A., Wright, C. R., & Michael, W. B. (1991). The relationship of scores on the Educators Survey, a modified version of the Maslach Burnout Inventory, to three teaching-related variables for a sample of 132 beginning teachers. Educational and Psychological Measurement, 51, 429-438.
- Kahill, S. (1988). Symptoms of professional burnout: A review of the empirical evidence. Canadian Psychology, 29, 284-297.
- Lee, R. T., & Ashforth, B. E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. Journal of Applied Psychology, 81, 123-133.
- Maslach, C. (1982). Burnout, the cost of

aring. Englewood Cliffs, N.J.: Prentice-Hall.

Maslach, C., & Goldberg, J. (1998). Prevention of burnout: New perspectives. Applied and Preventive Psychology, 7, 63-74.

Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). Maslach Burnout Inventory Manual, Third Edition. Palo Alto, CA: Consulting Psychologists Press.

Maslach, C., & Leiter, M. P. (1997). The truth about burnout: How organizations

cause personal stress and what to do about it. San Francisco, CA: Jossey-Bass.

Pierce, C. M. B., & Molloy, G. N. (1990). Psychological and biographical differences between secondary school teachers experiencing high and low levels of burnout. British Journal of Educational Psychology, 60, 37-51.

Toppinen-Tanner, S., Kalimo, R., & Mutanen, P. (2002). The Process of burnout in white-collar and blue-collar jobs: eight-year prospective study of exhaustion. Journal of Organizational Behavior, 23, 555-570.

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