

Career Optimism Mediates the Effect of Personality on Teachers' Career Engagement

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Abstract

Retaining teachers in the workforce is a major social issue as this vital profession suffers from low levels of prestige and high levels of attrition. This article is a report on research into the psychological predictors of career engagement in pre-service and practicing teachers ($N = 364$). It was hypothesized that teachers' conscientiousness and neuroticism would predict higher and lower career engagement, respectively, both directly and indirectly via career optimism. Structural equation modeling affirmed that career optimism mediated the relationships of conscientiousness and neuroticism with career engagement. The current findings highlight the need to investigate the contribution of career optimism to teachers' career engagement to capitalize on adaptive personality processes and mitigate the deleterious effects of negative emotionality.

Keywords: teachers; conscientiousness; neuroticism; teacher engagement; career satisfaction; optimism; work motivation; career development; Australia

There is an emerging body of research demonstrating that teachers' sense of career identity and engagement are important predictors of intention to stay or leave the profession (Hong, 2010; Kelly & Northrop, 2015; Klassen & Chiu, 2011). Such research is important because the workforce of school teachers is demonstrably in crisis with high levels of attrition among teachers who do not adjust to the demands of the occupation (OECD, 2013). A focus on teachers' qualities is present in recent calls in the USA for selecting the so-called best and brightest from highly selective colleges into teacher degree programs (Kelly & Northrop, 2015). Despite the putative benefits of such selectivity, the results of Kelly's and Northrop's (2015) longitudinal study highlight the importance of maintaining teachers' career satisfaction in the early years of practice so as to guard against exit from the profession. However, extant policy proposals do not adequately address the problem of engagement and attrition from a psychological perspective as policy interventions are primarily directed at influencing external work conditions (e.g., structural and organizational changes, competency frameworks, remuneration rates). Although psychological perspectives and interventions may have a role to play in building resilience in the teacher workforce, in recent decades there has been relatively limited research into the psychological dimensions of teachers' retention in the workforce (Guarino, Santibañez, & Daley, 2006). Thus, the current research is an exploration of psychological factors that influence teachers' career engagement.

An Integrative Model of Teachers' Career Engagement

Career engagement is a person's satisfaction with his or her career-related choices (e.g., choosing to become a teacher) and commitment to implementing that career choice (e.g., studying for a degree, taking professional learning workshops). With respect to teachers in the USA, for example, a national survey found that 83% of participants endorsed the item "involves work you love to do" as being absolutely essential to success, which was well above the 30% endorsement of remuneration (Farkas, Johnson, & Foleno, 2000; Guarino
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et al., 2006). This disparity that emphasizes a passion for teaching is consistent with meta-analytic research that indicates only a marginal relationship between remuneration and job satisfaction (Avey, Reichard, Luthans, & Mhatre, 2011; Judge, Piccolo, Podsakoff, Shaw, & Rich, 2010).

For the present study, we drew on the literature of vocational psychology to conceptualize teachers' career engagement through the lens of an integrative framework that incorporates dispositional traits and characteristic adaptations directly related to career (Rottinghaus & Miller, 2013). This framework bridges mainstream personality research with the vocational psychology of career development. Rottinghaus and Miller (2013) identified the vocational psychological constructs subsumed by dispositional traits (e.g., Big Five personality traits, vocational interests), characteristic adaptations (e.g., self-efficacy, career adaptability and optimism), and career narratives. The framework also identifies cultural and contextual factors, biological factors, and life events and situations. Thus, the current study has turned to the Rottinghaus and Miller framework to formulate hypotheses.

Dispositional Traits and Career Engagement

A meta-analysis of more than 800 studies found that the qualities of teachers, as distinct from teaching practices, have the greatest influence on students' learning outcomes, demonstrated by overall effect size of $d = .49$ (Hattie, 2009). Furthermore, that research found an effect size of $d = .72$ for the influence of relationships between teacher and student (Hattie, 2009). Also, students' experiences of teachers in terms of relational variables (e.g., empathy, warmth) are likely affected by teachers' psychological factors (e.g., personality). A recent meta-analysis found that teacher personality had a small but significant effect ($r = .08$) on teaching effectiveness (Klassen & Tze, 2014). Accordingly, at least from a student's perspective, there is reason to explore the dispositional traits of teachers with respect to their engagement in the teaching profession.

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Within the Australian context of the present study, a model proposed for the selection of students into teacher education degree programs includes the assessment of psychological factors (Bowles, Hattie, Dinham, Scull, & Clinton, 2014; Sautelle, Bowles, Hattie, & Arifin, 2015). Indeed, research suggests that how universities and colleges select and prepare future teachers for their transitions into and success in the workforce is of paramount importance to their career engagement and ultimately retention in the profession (Jensen, Sandoval-Hernandez, Knoll, & Gonzalez, 2012; Musset, 2010). This proposed selection model includes an assessment of the Big Five factors of personality (Costa & McCrae, 1992; McCrae & Costa, 2003), self-regulation skills (e.g., goals setting, self and environment management, task management, and self-evaluation), and resilience (i.e., persistence, optimism, ability to rebound, and self-care). In principle, implementation of this selection model should enhance teachers' transition into the workforce and their career engagement. Albeit appealing from a psychological standpoint, this model is in need of conceptual and empirical scrutiny, particularly given the limited amount of research into psychological factors affecting teachers' retention (Guarino et al., 2006), such as dispositional traits (Ripski, LoCasale-Crouch, & Decker, 2011).

The current study examines relations between dispositional traits and teachers' engagement in their profession. To be specific, the current study addressed conscientiousness and neuroticism in teachers because these traits are strong predictors of job satisfaction (Judge, Heller, & Mount, 2002). Furthermore, Decker and Rimm-Kaufman (2008) found higher than normative levels of conscientiousness ($d = 2.28$) and neuroticism ($d = .93$) in a sample of pre-service teachers.

Meta-analytic studies reveal that conscientiousness predicts job satisfaction (Judge et al., 2002) and performance motivation (Judge & Ilies, 2002). Conscientious people are planful, organised, and purposeful, which leads them to expend effort and set career goals. This manuscript is author version of: McIlveen, P., & Perera, H. N. (2015). Career optimism mediates the effect of personality on teachers' career engagement. *Journal of Career Assessment*. doi: 10.1177/1069072715616059

They are also dependable and persistent, and are consequently more likely to accomplish tasks and achieve goals, resulting in greater satisfaction (Barrick, Mount, & Strauss, 1993; Organ & Lingl, 1995). Extant evidence demonstrates that conscientious pre-service teachers tend to show healthy, ambitious behavior that is consistent with a commitment to the profession (Reichl, Wach, Spinath, Brünken, & Karbach, 2014). Conscientiousness also moderates the relationship between pre-service teachers' goal progress in their training and their sense of job satisfaction and emotional commitment to their school (Hülshager & Maier, 2010).

Meta-analytic research indicates that neuroticism is a significant negative predictor of job satisfaction (Judge et al., 2002) and performance motivation (Judge & Ilies, 2002).

People who are high in neuroticism are more anxious and tend to focus on their emotional states, which could interfere with attention to career goals and thereby lead to greater disengagement (De Raad & Schouwenburg, 1996). They also tend to retreat into a self-protective stance (Perera, McIlveen, & Oliver, in press), which could undermine engagement with their careers, especially under stressful circumstances. Indeed, neuroticism is associated with burnout (Cramer & Binder, 2015), occupational stress in high school teachers (Innes & Kitto, 1989), and unhealthy, stress-related coping in pre-service teachers—thus, putting them at risk of dropping-out (Reichl et al., 2014).

Based on this theory and research, we advance the following predictions:

- conscientiousness is positively and directly associated with teachers' academic major satisfaction (H_{1A}) and career choice satisfaction (H_{1B});
- neuroticism is negatively and directly associated with teachers' academic; and,
- major satisfaction (H_{2A}) and career choice satisfaction (H_{2B}).

Characteristic Adaptations and Career Engagement

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Although dispositional traits may have considerable influence on teachers' career engagement, the Rottinghaus and Miller (2013) framework requires consideration of characteristic adaptations with respect to their own unique influences on career engagement and their mediating influence between traits and engagement. Meta-analytic research indicates a positive relation between *psychological capital* (comprising the characteristic adaptations of hope, optimism, resilience, and efficacy) and work satisfaction, commitment, wellbeing, and performance (Avey et al., 2011). Furthermore, that meta-analytic research indicates a negative relation between psychological capital and undesirable attitudes and performance (e.g., stress, cynicism, turnover intent, and deviance). Teachers' self-efficacy, for example, has a strong influence upon burnout (Skaalvik & Skaalvik, 2010) and intention to quit (Klassen & Chiu, 2011). There is unequivocal international research demonstrating the positive influence of teachers' efficacy on their career engagement (OECD, 2014) and effectiveness (Klassen & Tze, 2014), yet there is relatively less research that discerns the effects of other characteristic adaptations or psychological capital.

The model of teacher motivation proposed by Neves de Jesus and Lens (2005) provides evidence of the positive effects of *success expectancies* on teachers' professional engagement. According to this model, if teachers hold positive expectations for work in the classroom (e.g., favorable expectations for student learning) then they experience heightened levels of professional engagement. In support of this model, there is some evidence that an optimistic explanatory style influences teacher effectiveness (Duckworth, Quinn, & Seligman, 2009). For the current research, we distinguish between *trait optimism* (Carver & Scheier, 2005, 2014), which has demonstrable positive effects on career satisfaction, motivation, and wellbeing (Lee et al., 2013; Lounsbury et al., 2003; Nes & Segerstrom, 2006; Rasmussen, Scheier, & Greenhouse, 2009), and the relatively new construct, *career optimism*

(Rottinghaus, Day, & Borgen, 2005), which is conceived of as a characteristic adaptation

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(Rottinghaus & Miller, 2013). The present formulation of career optimism is consistent with the measure of success expectancies operationalized in the study of teachers by Neves de Jesus and Lens (2005); however, the measure of career optimism in the current study differs with respect to its focus on positive expectations pertaining to career identity; whereas, the measure used by Neves de Jesus and Lens focused on teachers' positive expectancies for their students' engagement and outcomes.

Considered through the lens of the Rottinghaus and Miller (2013), we suggest that career optimism may mediate the expected links from conscientiousness and neuroticism to career engagement. Current vocational psychology research reports significant positive associations of conscientiousness and negative associations of neuroticism with career optimism (McIlveen, Beccaria, & Burton, 2013; Rottinghaus et al., 2005). Conscientious individuals are more likely to be optimistic about their careers because they expend greater effort in attaining career goals; the greater career optimism sustains that effort and may, in turn, lead to greater engagement (Carver, Scheier, & Segerstrom, 2010). Conversely, individuals high on neuroticism are more likely to be dissatisfied with their career choice (or less engaged with their careers) because of low career optimism (Rottinghaus et al., 2005). In terms of the pathway from neuroticism to engagement, the presence of low career optimism may perpetuate the lack of effort expended as the low expectancies lead to decreased effort (Carver et al., 2010).

Accordingly, we advance the following predictions regarding career optimism as a mediator of the effects of dispositional traits on career engagement:

- higher conscientiousness (H_3) and neuroticism (H_4) are directly associated with greater and lesser career optimism, respectively;
- career optimism is directly and positively associated with teachers' academic major satisfaction (H_{5A}) and career choice satisfaction (H_{5B});

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- career optimism mediates the relationship of conscientiousness with teachers' academic major satisfaction (H_6) and career choice satisfaction (H_7); and,
- career optimism mediates the relationship of neuroticism with teachers' academic major satisfaction (H_8) and career choice satisfaction (H_9).

The Present Research and Alternative Models

Based on the preceding rationale and evidence reviewed, we specified and tested a partial mediation model in which conscientiousness and neuroticism were expected to predict academic major satisfaction and career choice satisfaction both directly and indirectly via career optimism. In addition to empirically testing this target mediation model and implied hypotheses, four alternative models were specified to assess the tenability of complete mediation of the relations of conscientiousness and neuroticism with academic major satisfaction and career choice satisfaction in which the direct paths from the dispositional traits to career engagement criteria were fixed to zero.

Method

Participants

Participants ($N = 364$) were pre-service teachers enrolled in undergraduate degrees ($n = 253$) and in-service teachers enrolled in graduate degrees ($n = 110$) in education offered by a medium-sized university in regional Australia. One participant did not report degree level. The average age of participants was 33.84 ($SD = 12.18$; range = 17–64), and 81% of the sample was female. English was the first language of 95.4% of the participants, and 4.6% identified themselves as Aboriginal or Torres Strait Islander—the Indigenous first nations of Australia—which is consistent with the population proportion (i.e., 4.2%) in the state of Queensland in which the university is located (Australian Bureau of Statistics, 2011). Participants were those who responded to an email invitation from the university's central

administration, which included the optional incentive of entering a prize-draw for vouchers. The university's Human Research Ethics Committee approved the research.

Measures

Dispositional traits. Latent conscientiousness and neuroticism were indicated by items from the NEO-FFI (Costa & McCrae, 1992). The NEO-FFI is a validated and frequently-used measure of the five factor model of personality. Although the three other factors were measured concurrently, they were not germane to the current study and its hypotheses. The 12-item scale for each personality domain requires a self-report rating using a range of 1 (*strongly disagree*) to 5 (*strongly agree*). Costa and McCrae reported internal consistencies of $\alpha = .83$ for conscientiousness and $\alpha = .79$ for neuroticism. In the current study $\alpha = .86$ for conscientiousness and $\alpha = .88$ for neuroticism. In addition to the adequate internal consistency, factorial (Marsh et al., 2010), convergent (John & Srivastava, 1999), and criterion-related (Perera et al., 2015) validity have been demonstrated.

Career optimism. Latent career optimism was indicated by items from the Career Optimism subscale of the Career Futures Inventory (Rottinghaus et al., 2005), which measures "a disposition to expect the best possible outcome or to emphasize the most positive aspects of one's future career development, and comfort in performing career planning tasks" (p. 11). Thus, for participants in the current study, this would mean expectations of positive outcomes with respect to one's career in teaching. The 11-item scale requires self-report rating using a range of 1 (*strongly disagree*) to 5 (*strongly agree*). The internal consistency of the original scale was $\alpha = .87$. In the current study $\alpha = .88$. Furthermore, evidence has been obtained for the convergent and criterion validity of scores derived from this scale (McIlveen, Beccaria, & Burton, 2013; Tolentino et al., 2014).

Academic major satisfaction. Latent academic major satisfaction was indexed by items from the Academic Major Satisfaction Scale (Nauta, 2007). This scale is a measure of

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global satisfaction with students' choice of major within a degree program. For the purposes of the current study, this would mean satisfaction with one's choice of education as a major. The six-item scale requires self-report rating using a range of 1 (*strongly disagree*) to 5 (*strongly agree*). The internal consistencies for the original scale scores in its two validation studies were $\alpha = .94$ and $\alpha = .90$. In the current study $\alpha = .92$. Evidence has also been obtained for factorial (Nauta, 2007) and criterion (McIlveen et al., 2013) validity.

Career choice satisfaction. Latent career choice satisfaction was indicated by items from the Career Choice Status Inventory (Savickas, 1993). This scale is a measure of satisfaction with occupational choice. For the purposes of the current study, this measure is broader than academic major satisfaction and pertains to one's choice of teaching as a career. The six items require self-report rating using a range of 1 (*very dissatisfied and intend to change*) to 5 (*well satisfied with choice*). Lewis and Savickas (1995) reported internal consistency of $\alpha = .91$. In the current study $\alpha = .86$. In addition, adequate concurrent validity has been established (Lewis & Savickas, 1995).

Analytic Protocol

The analyses involved confirmatory factor analysis (CFA) and structural equation modeling (SEM). First, a five-factor CFA model was specified to test the proposed measurement structure underlying the observed data. For the manifest indicators of conscientiousness and neuroticism (cf., Perera et al., 2015), 22 sets of correlated residuals were specified to account for potential local dependence generated by item-clustering due to unmodeled facet structures. In constructing the NEO-FFI, items were selected from the larger NEO-PI-R without recognition for the facet structure underlying the items. Thus, it may be expected that any two items from the same facet have higher correlations than those from different facets as a result of higher content overlap, with some common variance potentially unaccounted for by the general Big-Five factors (Marsh et al., 2010). This manuscript is author version of: McIlveen, P., & Perera, H. N. (2015). Career optimism mediates the effect of personality on teachers' career engagement. *Journal of Career Assessment*. doi: 10.1177/1069072715616059

systematic item covariance above and beyond the latent factor can be accounted for by correlated uniqueness. A further seven correlated residuals were specified concerning items from the Career Optimism subscale of the Career Futures Inventory, Academic Major Satisfaction Scale, and the Career Choice Status Inventory. For example, a correlated residual was specified between items four and five of the Career Optimism scale due to a potential method effect emerging from highly-similar item phrasings representing systematic error variance (“It is difficult for me to set career goals”, “It is difficult to relate my abilities to a specific career plan”). Similarly, a correlated residual between items four and five of the Academic Major Satisfaction Scale was freely estimated due to highly similar wordings characterizing these items (“Overall, I am happy with the major I’ve chosen”, “I feel good about the major I’ve chosen”). The failure to specify these sources of systematic common variance can lead to upwardly biased factor correlation estimates (Marsh et al., 2010). The 29 correlated uniqueness specifications can be found in Supplemental Appendix A¹.

The CFA and SEM analyses were performed using Mplus 7.3 (Muthén & Muthén, 1998-2012). The measurement and structural models were estimated using robust diagonal weighted least squares with a mean-and-variance adjusted test statistic, operationalized as the WLSMV estimator in Mplus, under theta parameterization. An inclusive approach to model fit evaluation was used, comprising an assessment of fit indices, parameter estimates, and alternative models. As the χ^2 can be oversensitive to minor model misspecifications and contains a restrictive hypothesis test (i.e., exact fit), we relied on the comparative fit index (CFI), Tucker-Lewis index (TLI), and root mean square error of approximation (RMSEA) (Marsh, Balla, & McDonald, 1988). CFI and TLI values > .90 and .95 are indicative of acceptable and excellent fit, respectively; and RMSEA values < .05 and .08 are suggestive of

¹ Supplemental Appendices are available from the second author’s ResearchGate account.

close and reasonable fit, respectively (Marsh, Hau, & Wen, 2004). For nested model comparisons, we used the change in CFI (Δ CFI) with decreases in fit less than .01 suggestive of support for a more parsimonious model (Cheung & Rensvold, 2002). For tests of the indirect effects, we implemented the bootstrap procedure with 5,000 resamples, constructing 95% bias-corrected confidence intervals around the point estimates (Perera, 2013).

Results

Primary Analysis

Descriptives and correlations. Sample thresholds and polychoric correlations for the 47 observed variables can be obtained from Supplemental Appendix B accompanying this paper.

Measurement model. A five-factor CFA was conducted to test the expected measurement structure underlying the manifest indicators. The test of this model converged to an admissible solution and resulted in a good fit to the data, $\chi^2(995) = 1556.022, p < .001$, CFI = .973, TLI = .971, RMSEA = .039 (90% CI = .036, .043). All 47 standardized loadings of the manifest indicators on the five latent variables were uniformly moderate-to-high, ranging from .436 to .945 ($M = .701$), and statistically significant (see Supplemental Appendix C for the complete loadings matrix). On this basis, all the latent variables appear to have been adequately operationalised by their respective indicators. Furthermore, all 10 unique correlations among the latent variables were statistically significant and in the expected directions (see Table 1).

INSERT TABLE 1 ABOUT HERE

Structural model. The target structural model reflecting partial mediation was specified with (a) direct paths from conscientiousness and neuroticism to academic major satisfaction and career choice satisfaction and (b) indirect paths through career optimism. A disturbance covariance for the outcome constructs was freely estimated because it was

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assumed that academic major satisfaction and career choice satisfaction share at least one omitted “cause” not specified in the model (Kline, 2012). The test of this model provided an identical fit to the data as the well-fitting measurement model (see Table 2), which should be expected as the model is structurally saturated. The fit of the target model was compared to a more parsimonious model, AM1, in which the direct path from conscientiousness to academic major satisfaction was constrained to zero. Support for the more restrictive model would be indicative of a completely mediated relation of the conscientious-academic major satisfaction link. The restricted alternative model also provided an acceptable fit to the data, and did not result in an appreciable decrease in fit relative to the more complex model (see Table 2). Thus, the more parsimonious alternative model was retained for further analysis.

A second alternative parametric structure AM2 was examined to determine whether the specification of a fully mediated conscientiousness-career choice satisfaction link provides a better, more parsimonious, fit to the data than the retained model. The test of AM2 also resulted in an acceptable fit to the data (see Table 2); and, based on a nested model comparison, did not result in degradation in fit relative to AM1 (see Table 2). Thus, this more parsimonious model was retained for further analysis.

The fit of the retained AM2 model was compared to a third, even more restrictive, alternative model, AM3, implying full-mediation of the neuroticism-career choice satisfaction relationship. Assessment of the constrained AM3 model resulted in an acceptable fit to the sample data (see Table 2), and did not lead to a statistically significant decrement in fit relative to the less restrictive AM2 solution (see Table 2). Finally, the AM3 solution was compared to a more parsimonious model, AM4, implying a completely mediated link between neuroticism and academic major satisfaction. AM4 provided an acceptable fit to the sample data and, notably, did not result in a meaningful decrement in fit

relative to AM3 (see Table 2). On this basis the more parsimonious model was retained as the final parametric structure for interpretation and further analysis.

INSERT TABLE 2 ABOUT HERE

The final structural model is displayed in Figure 1. No support was found for H_{1A} , H_{1B} , H_{2A} , and H_{2B} as the structural models constraining to zero the direct paths from conscientiousness and neuroticism to academic major satisfaction and career choice satisfaction did not result in meaningful decrements in fit relative to the less restrictive models in which these direct paths were freely estimated. However, support was obtained for H_3 and H_4 as both conscientiousness and neuroticism significantly predicted higher and lower career optimism, respectively. Moreover, in line with H_{5A} , and H_{5B} , higher career optimism was associated with greater academic major satisfaction and career choice satisfaction, respectively.

INSERT FIGURE 1 ABOUT HERE

Indirect relations. As shown in Table 3, all four of the hypothesized indirect relations were in the expected directions and statistically significant. Consistent with H_6 and H_7 , there were statistically significant indirect associations of conscientiousness with higher academic major satisfaction and career choice satisfaction, respectively, via career optimism. Furthermore, in line with H_8 and H_9 , greater neuroticism was significantly and indirectly associated with lower academic major satisfaction and career choice satisfaction, respectively, via career optimism.

INSERT TABLE 3 ABOUT HERE

Discussion

This study highlights the effects of conscientiousness, neuroticism, and career optimism on pre-service teachers' and in-service teachers' engagement with their profession, indicated by their levels of satisfaction with choice of career and academic major. Whereas

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Neves de Jesus and Lens found relationships among social cognitive motivators (i.e., control, efficacy, and success expectancy) and professional engagement, the current findings extend their results by proving a structural model that captures all of the plausible relationships, including the mediation pathways from conscientious and neuroticism to career engagement via career optimism. In the current model, career optimism completely mediates those respective relationships. In other words, career optimism carries the positive effects of conscientiousness onto satisfaction with choice of career and academic major. Conversely, the findings also show that the reason teachers high on neuroticism experienced lower engagement is because they were less optimistic about their careers. These new findings contribute to theory on teachers' engagement.

Implications for Teacher Education and Teaching Practice

The results of this study provide initial evidence of the validity of the model for selecting candidates for teacher education programs proposed by Bowles et al. (2014); that is, personality factors—conscientiousness and neuroticism—do have a relationship with satisfaction with teaching as a career. The selection model also posits optimism as a dimension of the resilience needed to be a teacher. Indeed, this study provides evidence that optimism is an important quality for currently practising teachers; thus, the study provides some evidence of the ecological validity of the selection model. Therefore, in addition to using personality as a selection variable, it may be appropriate to extend a battery of selection measures to include optimism.

The findings of this study also present a rationale to speculate on the dynamics of teachers' resilience, particularly given that teachers' sense of career identity and engagement predicts intention to stay or leave the profession (Hong, 2010; Klassen & Chiu, 2011).

Consider the teacher who might score high on a measure of neuroticism. It is likely that this teacher would experience situation-specific anxiety in the classroom (e.g., the challenges of

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student behavior and management), ongoing anxiety with regard to satisfaction with his/her career as a teacher (e.g., ruminations and doubt), and therefore he/she would be at-risk of burnout or departure from the profession. This teacher may very well have sound instructional efficacy; however, nagging self-doubt and criticism may dog him/her due to a neurotic disposition. On the basis of the results reported here, one might speculate that fostering optimism within this teacher could serve to minimize the thoughts and feelings of self-doubt, criticism, or cynicism and, consequently, preserve his/her career satisfaction. Conversely, a conscientious teacher, one who is dependable and committed, may experience heightened engagement in the profession if he/she were to develop a greater sense of optimism for his/her career. In both cases, one might speculate that fostering optimism in these teachers may serve to enhance their positive experiences of being a teacher.

Although optimism has been conceptualized as a fairly stable disposition, optimism can be learned and taught (Seligman, 2011) by using, for example, reflecting writing activities (Peters, Flink, Boersma, & Linton, 2010), and, conversely, learning activities to curb unrealistic optimism (Haynes, Ruthig, Perry, Stupnisky, & Hall, 2006). We believe that there is potential for counseling and educational interventions that aim to enhance pre-service and in-service teachers' optimism and career engagement. Similarly, Kelly and Northrop (2015) suggested that counseling for career goals may have a positive effect on beginning teachers' career satisfaction. Experimental or longitudinal research into such interventions may provide evidence to test their impact and outcomes.

Limitations

A potential limitation is the cross-sectional design of the present study. As mediation inherently comprises sequential causal processes that take place over time, a longitudinal design is ideally required to test mediation hypotheses and avoid biased mediated effects

(Maxwell & Cole, 2007). Thus, some caution is urged in the interpretation of the mediated

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effects obtained in the present study based on cross-sectional data. We encourage future investigators to examine these observed mediation effects using robust longitudinal designs with theoretically plausible autoregressive and cross-lagged parameters (Cole and Maxwell, 2003).

Conclusion

This study provides initial evidence of the mediating role of career optimism in the links between teachers' personality and satisfaction with teaching as a career. In this regard, the findings of the study make important advances in understanding the mechanisms through which teachers' personality is associated with engagement in their profession. As a facet of teacher resilience, optimism is an interesting point of focus for future research. Although optimism may be conceptualised as dispositional, it is also amenable to change through learning as a characteristic adaptation, and may be a crucial point of intervention to foster adaptive personality processes or minimize deleterious personality processes.

References

- Australian Bureau of Statistics. (2011). 3238.0.55.001 Estimates of Aboriginal and Torres Strait Islander Australians.
<http://www.abs.gov.au/ausstats/abs@.nsf/mf/3238.0.55.001>
- Avey, J. B., Reichard, R. J., Luthans, F., & Mhatre, K. H. (2011). Meta-analysis of the impact of positive psychological capital on employee attitudes, behaviors, and performance. *Human Resource Development Quarterly*, 22(2), 127-152. doi: 10.1002/hrdq.20070
- Barrick, M. R., Mount, M. K., & Strauss, J. P. (1993). Conscientiousness and performance of sales representatives: Test of the mediating effects of goal setting. *Journal of Applied Psychology*, 78(5), 715.
- Bowles, T., Hattie, J., Dinham, S., Scull, J., & Clinton, J. (2014). Proposing a comprehensive model for identifying teaching candidates. *The Australian Educational Researcher*, 1-16. doi: 10.1007/s13384-014-0146-z
- Carver, C. S., & Scheier, M. F. (2005). Optimism. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 231-243). New York, NY: Oxford University Press.
- Carver, C. S., & Scheier, M. F. (2014). Dispositional optimism. *Trends in cognitive sciences*, 18(6), 293-299. doi: doi:10.1016/j.tics.2014.02.003
- Carver, C. S., Scheier, M. F., & Segerstrom, S. C. (2010). Optimism. *Clin Psychol Rev*, 30(7), 879-889. doi: 10.1016/j.cpr.2010.01.006
- Costa, P. T., & McCrae, R. R. (1992). *Revised neo personality inventory (neo pi-r) and neo five-factor inventory (neo-ffi)*. Odessa, FL: Psychological Assessment Resources.
- Cramer, C., & Binder, K. (2015). The relationship between personality traits and burnout among teachers. An international systematic review. *Zeitschrift fur Erziehungswissenschaft*, 18(1), 101-123. doi: 10.1007/s11618-014-0605-3
- This manuscript is author version of: McIlveen, P., & Perera, H. N. (2015). Career optimism mediates the effect of personality on teachers' career engagement. *Journal of Career Assessment*. doi: 10.1177/1069072715616059

- De Raad, B., & Schouwenburg, H. C. (1996). Personality in learning and education: a review. *European Journal of Personality, 10*(5), 303-336. doi: 10.1002/(sici)1099-0984(199612)10:5<303::aid-per262>3.0.co;2-2
- Decker, L. E., & Rimm-Kaufman, S. E. (2008). Personality characteristics and teacher beliefs among pre-service teachers. *Teacher Education Quarterly, 45*-64.
- Duckworth, A. L., Quinn, P. D., & Seligman, M. E. P. (2009). Positive predictors of teacher effectiveness. *The Journal of Positive Psychology, 4*(6), 540-547. doi: 10.1080/17439760903157232
- Farkas, S., Johnson, J., & Foleno, T. (2000). *A sense of calling: Who teaches and why*. New York, NY: Public Agenda Foundation.
- Guarino, C. M., Santibañez, L., & Daley, G. A. (2006). Teacher recruitment and retention: A review of the recent empirical literature. *Review of Educational Research, 76*(2), 173-208. doi: 10.3102/00346543076002173
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Abingdon, UK: Routledge.
- Haynes, T. L., Ruthig, J. C., Perry, R. P., Stupnisky, R. H., & Hall, N. C. (2006). Reducing the academic risks of over-optimism: The longitudinal effects of attributional retraining on cognition and achievement. *Research in Higher Education, 47*(7), 755-779. doi: 10.1007/s11162-006-9014-7
- Hong, J. Y. (2010). Pre-service and beginning teachers' professional identity and its relation to dropping out of the profession. *Teaching and Teacher Education, 26*(8), 1530-1543. doi: <http://dx.doi.org/10.1016/j.tate.2010.06.003>
- Hülshager, U. R., & Maier, G. W. (2010). The careless or the conscientious: Who profits most from goal progress? *Journal of Vocational Behavior, 77*(2), 246-254. doi: <http://dx.doi.org/10.1016/j.jvb.2010.04.001>
- This manuscript is author version of: McIlveen, P., & Perera, H. N. (2015). Career optimism mediates the effect of personality on teachers' career engagement. *Journal of Career Assessment, 23*(1), 10-25. doi: 10.1177/1069072715616059

- Innes, J. M., & Kitto, S. (1989). Neuroticism, self-consciousness and coping strategies, and occupational stress in high school teachers. *Personality and Individual Differences*, 10(3), 303-312. doi: [http://dx.doi.org/10.1016/0191-8869\(89\)90103-7](http://dx.doi.org/10.1016/0191-8869(89)90103-7)
- Jensen, B., Sandoval-Hernandez, A., Knoll, S., & Gonzalez, E. J. (2012). *The experience of new teachers: Results from TALIS 2008*. doi:10.1787/9789264120952-en
- Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology*, 87(3), 530-541. doi: 10.1037/0021-9010.87.3.530
- Judge, T. A., & Ilies, R. (2002). Relationship of personality to performance motivation: A meta-analytic review. *Journal of Applied Psychology*, 87(4), 797-807. doi: 10.1037/0021-9010.87.4.797
- Judge, T. A., Piccolo, R. F., Podsakoff, N. P., Shaw, J. C., & Rich, B. L. (2010). The relationship between pay and job satisfaction: A meta-analysis of the literature. *Journal of Vocational Behavior*, 77(2), 157-167. doi: <http://dx.doi.org/10.1016/j.jvb.2010.04.002>
- Kelly, S., & Northrop, L. (2015). Early career outcomes for the “Best and the Brightest”: Selectivity, satisfaction, and attrition in the Beginning Teacher Longitudinal Survey. *American Educational Research Journal*. doi: 10.3102/0002831215587352
- Klassen, R. M., & Chiu, M. M. (2011). The occupational commitment and intention to quit of practicing and pre-service teachers: Influence of self-efficacy, job stress, and teaching context. *Contemporary Educational Psychology*, 36(2), 114-129. doi: <http://dx.doi.org/10.1016/j.cedpsych.2011.01.002>
- Klassen, R. M., & Tze, V. M. C. (2014). Teachers' self-efficacy, personality, and teaching effectiveness: A meta-analysis. *Educational Research Review*, 12, 59-76. doi: <http://dx.doi.org/10.1016/j.edurev.2014.06.001>
- This manuscript is author version of: McIlveen, P., & Perera, H. N. (2015). Career optimism mediates the effect of personality on teachers' career engagement. *Journal of Career Assessment*. doi: 10.1177/1069072715616059

- Kline, R. B. (2012). *Assumptions in structural equation modeling*. New York, NY: Guilford Press.
- Lee, J. H., Nam, S. K., Kim, A. R., Kim, B., Lee, M. Y., & Lee, S. M. (2013). Resilience: A meta-analytic approach. *Journal of Counseling & Development, 91*(3), 269-279. doi: 10.1002/j.1556-6676.2013.00095.x
- Lewis, D. M., & Savickas, M. L. (1995). Validity of the Career Factors Inventory. *Journal of Career Assessment, 3*(1), 44-56. doi: 10.1177/106907279500300104
- Lounsbury, J. W., Loveland, J. M., Sundstrom, E. D., Gibson, L. W., Drost, A. W., & Hamrick, F. L. (2003). An investigation of personality traits in relation to career satisfaction. *Journal of Career Assessment, 11*(3), 287-307. doi: 10.1177/1069072703254501
- McCrae, R. R., & Costa, P. T. (2003). *Personality in adulthood: A five-factor theory perspective* (2nd ed.). New York, NY: The Guilford Press.
- McIlveen, P., Beccaria, G., & Burton, L. J. (2013). Beyond conscientiousness: Career optimism and satisfaction with academic major. *Journal of Vocational Behavior, 83*(3), 229-236. doi: 10.1016/j.jvb.2013.05.005
- Musset, P. (2010). *Initial teacher education and continuing training policies in a comparative perspective*. Paris, France: OECD Publishing.
- Nauta, M. M. (2007). Assessing college students' satisfaction with their academic majors. *Journal of Career Assessment, 15*(4), 446-462. doi: 10.1177/1069072707305762
- Nes, L. S., & Segerstrom, S. C. (2006). Dispositional Optimism and Coping: A Meta-Analytic Review. *Personality and Social Psychology Review, 10*(3), 235-251. doi: 10.1207/s15327957pspr1003_3

This manuscript is author version of: McIlveen, P., & Perera, H. N. (2015). Career optimism mediates the effect of personality on teachers' career engagement. *Journal of Career Assessment*. doi: 10.1177/1069072715616059

- Neves de Jesus, S., & Lens, W. (2005). An integrated model for the study of teacher motivation. *Applied Psychology, 54*(1), 119-134. doi: 10.1111/j.1464-0597.2005.00199.x
- OECD. (2013). *Teachers for the 21st Century*. Paris, France: OECD Publishing.
- OECD. (2014). *TALIS 2013 results: An international perspective on teaching and learning*. Paris, France: OECD Publishing.
- Organ, D. W., & Lingl, A. (1995). Personality, satisfaction, and organizational citizenship behavior. *The journal of social psychology, 135*(3), 339-350. doi: 10.1080/00224545.1995.9713963
- Perera, H. N. (2013). A novel approach to estimating and testing specific mediation effects in educational research: explication and application of Macho and Ledermann's (2011) phantom model approach. *International Journal of Quantitative Research in Education, 1*(1), 39-60. doi: 10.1504/IJQRE.2013.055640
- Perera, H. N., McIlveen, P., Burton, L. J., & Corser, D. M. (2015). Beyond congruence measures for the evaluation of personality factor structure replicability: An exploratory structural equation modeling approach. *Personality and Individual Differences, 84*(0), 23-29. doi: <http://dx.doi.org/10.1016/j.paid.2015.01.004>
- Perera, H. N., McIlveen, P., & Oliver, M. E. (in press). The mediating roles of coping and adjustment in the relationship between personality and academic achievement. *British Journal of Educational Psychology*. doi: 10.1111/bjep.12084
- Peters, M. L., Flink, I. K., Boersma, K., & Linton, S. J. (2010). Manipulating optimism: Can imagining a best possible self be used to increase positive future expectancies? *The Journal of Positive Psychology, 5*(3), 204-211. doi: 10.1080/17439761003790963
- Rasmussen, H. N., Scheier, M. F., & Greenhouse, J. B. (2009). Optimism and physical health: A meta-analytic review. *Annals of behavioral medicine, 37*(3), 239-256.
- This manuscript is author version of: McIlveen, P., & Perera, H. N. (2015). Career optimism mediates the effect of personality on teachers' career engagement. *Journal of Career Assessment*. doi: 10.1177/1069072715616059

- Reichl, C., Wach, F. S., Spinath, F. M., Brünken, R., & Karbach, J. (2014). Burnout risk among first-year teacher students: The roles of personality and motivation. *Journal of Vocational Behavior*, 85(1), 85-92. doi: 10.1016/j.jvb.2014.05.002
- Ripski, M. B., LoCasale-Crouch, J., & Decker, L. (2011). Pre-service teachers: Dispositional traits, emotional states, and quality of teacher-student interactions. *Teacher Education Quarterly*, 38(2), 77-96.
- Rottinghaus, P. J., Day, S. X., & Borgen, F. H. (2005). The Career Futures Inventory: A measure of career-related adaptability and optimism. *Journal of Career Assessment*, 13(1), 3-24. doi: 10.1177/1069072704270271
- Rottinghaus, P. J., & Miller, A. D. (2013). Convergence of personality frameworks within vocational psychology. In B. W. Walsh, M. L. Savickas & P. J. Hartung (Eds.), *Handbook of vocational psychology: Theory, research, and practice* (4th ed., pp. 105-131). New York, NY: Routledge.
- Sautelle, E., Bowles, T., Hattie, J., & Arifin, D. N. (2015). Personality, resilience, self-regulation and cognitive ability relevant to teacher selection. *Australian Journal of Teacher Education*, 40(4), 54-71. doi: 10.14221/ajte.2015v40n4.4
- Savickas, M. L. (1993). *Career Choice Status Inventory*. Unpublished manuscript. Rootstown, OH: Northeastern Ohio Universities College of Medicine.
- Seligman, M. E. (2011). *Learned optimism: How to change your mind and your life*. North Sydney, Australia: William Heinemann.
- Skaalvik, E. M., & Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and Teacher Education*, 26(4), 1059-1069. doi: <http://dx.doi.org/10.1016/j.tate.2009.11.001>

This manuscript is author version of: McIlveen, P., & Perera, H. N. (2015). Career optimism mediates the effect of personality on teachers' career engagement. *Journal of Career Assessment*. doi: 10.1177/1069072715616059

Table 1.

Correlations among the Latent Variables from the Retained Measurement Solution.

	1	2	3	4	5
1. C	–				
2. N	–.504	–			
3. CO	.577	–.451	–		
4. AMS	.375	–.364	.523	–	
5. CCS	.355	–.319	.490	.470	–

Note. $N = 364$. C = conscientiousness; N = neuroticism; CO = career optimism; AMS = academic major satisfaction; CCS; Career Choice Satisfaction. All correlations are statistically significant at $p < .001$.

Table 2.

Summary of Model-Data fit statistics for the target and alternate structural models

Model	χ^2	df	RMSEA	90% CI	CFI	Δ CFI	TLI	MD χ^2 (df)
Target model	1556.022****	995	.039	[.036, .043]	.973		.9711	
AM1 with γ_{21} constrained to zero	1540.745****	996	.039	[.035, .043]	.974	+ .001	.971	0.542 (1)
AM2 with γ_{31} constrained to zero	1536.574****	997	.039	[.035, .042]	.974	.000	.972	1.026 (1)
AM3 with γ_{32} constrained to zero	1550.413****	998	.039	[.035, .043]	.973	- .001	.971	6.715** (1)
AM4 with γ_{22} constrained to zero	1563.817****	999	.039	[.036, .043]	.973	.000	.970	6.117* (1)

Note. $N = 364$. * $p < .05$, ** $p < .01$ *** $p < .001$ RMSEA = root mean square error of approximation; 90% CI = confidence interval for the RMSEA; CFI = comparative fit index; Δ CFI = change in CFI; TLI = Tucker-Lewis index; MD $\chi^2 = \chi^2$ difference test appropriate for the WLSMV estimator.

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Table 3.

Bootstrap Estimates of the Indirect Effects, Standard Errors and Bias-Corrected 95% Confidence Intervals

Predictor		Mediator		Outcome	ab_{cs}	SE_{cs}	BC 95% CI for mean ab_{cs}
Conscientiousness	→	Career optimism	→	Academic major satisfaction	.270	.046	[.183, .364]*
Conscientiousness	→	Career optimism	→	Career choice satisfaction	.250	.043	[.166, .334]*
Neuroticism	→	Career optimism	→	Academic major satisfaction	-.152	.043	[-.237, -.067]*
Neuroticism	→	Career optimism	→	Career choice satisfaction	-.139	.040	[-.218, -.061]*

Note. $N = 364$. ab_{cs} = completely standardized indirect association; SE_{cs} = standard error of the standardized indirect effect estimate; BC = bias corrected; CI = confidence interval for the standardized indirect effect. * This 95% confidence interval excludes zero; therefore, the indirect relation is significant at $p < .05$.

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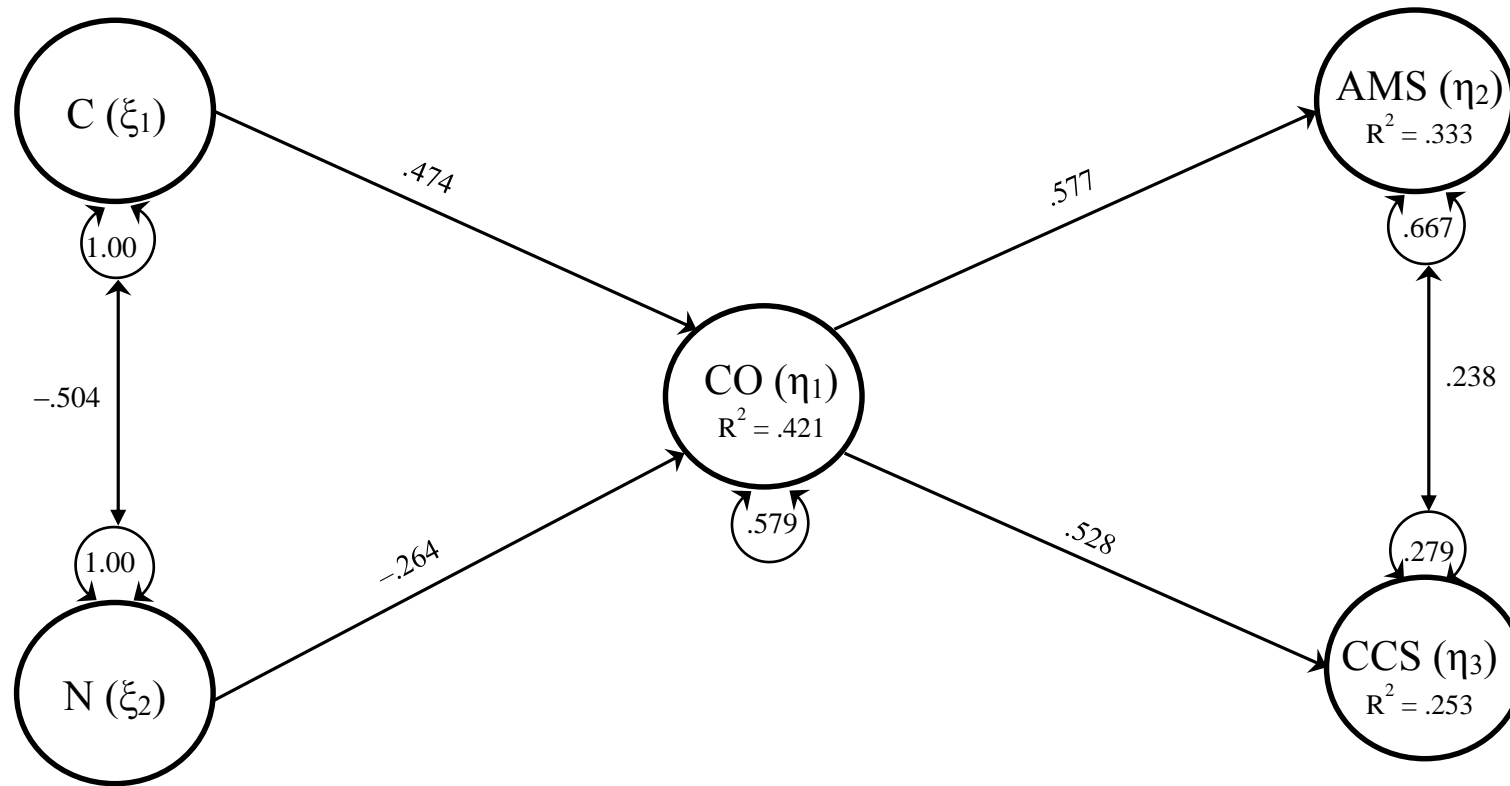


Figure 1. Final structural; model with standardized estimates. Note. C = conscientiousness; N = neuroticism; CO = career optimism; AMS = academic major satisfaction; CCS = career choice satisfaction. N = 364. All

estimates are statistically significant at $p < .001$.

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