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Abstract

Since the late 20th century, the Protean (Hall, 1996) and Boundaryless (Arthur, 1994) career concepts have been posited as explanations for employment transformations in corporate structures. While previous research (Briscoe, Hall, & Fratschy DeMuth, 2006) provides evidence of these constucts with business students, research has lacked in evaluating the Protean and Boundaryless Career Attitudes Scale (PBCAS) with other professions. The purpose of this study was to investigate the factor structure of the PBCAS with 350 undergraduate teacher candidates and to test the new model with a second sample (n = 194). The results showed moderate support for the validity of the PBCAS with teacher candidates. The data produced a five-factor model similar to the factor structure reported by de Bruin and Buchner (2010). These results support previous findings and indicate the need for further research with the instrument.

In 1996, Hall and Associates proclaimed, “the career is dead, long live the career” (p. 1) thereby announcing a paradigm shift was underway in how the western world experienced a lifelong career. Previously, career was conceptualized by Super (1990) as a progression of stages that unfolded over a lifetime of work with mini-cycles occurring throughout the lifespan. Hall (1996) and Arthur and Rousseau (1996), however, proposed a shift in this sequential phenomena. Recent literature described below, supports the idea the teaching profession may be experiencing similar shifts in employment trends.

According to Ingersoll (2001), the profession of teaching has been experiencing *migration*, or job transitioning. Henke, Chen, and Geis (2000) found one in five teacher program graduates left teaching within four years of beginning a teaching career. Goldring, Taie, & Riddles (2014) report that teacher attrition is still evident. Many factors, including teacher compensation, professional prestige, available resources and support, and narrowed career path alternatives (Johnson & Birkeland, 2003), are proposed as reasons for the high rates of teacher attrition. According to Johnson and Birkeland, teachers cited organizational support and work environment as strong determinants for the decision to stay or leave a school or the profession. The authors also found training in traditional versus non-traditional teacher preparation programs was a predictor of attrition.

Johnson and Birkeland (2003) discussed that teacher candidates experience more career options and may possess a different value set than the population of teachers now retiring. Recognizing the array of career alternatives and opportunities available to the new generation of teachers, Johnson and Birkeland promoted the understanding of current teachers, allowing administrators to consider what incentives will attract and keep teachers.

Watt and Richardson (2007) developed an instrument to measure aspects of personal motivation in selecting teaching as a career and, noting gaps in the literature, proposed using a model focused on personal motivation to understand and address teacher migration. With this in mind, we sought to test a model from the organizational development literature concerning the Protean (Hall et al., 1996) and Boundaryless (Arthur & Rousseau, 1996) career concepts.

The purpose of this study was to test the factor structure of an instrument, validated on business school students, with teacher candidates to investigate whether the proposed model would replicate in teacher education candidates. Our intent was to explore possible similarities of attitudes and values toward self-directed careers and career mobility between business school and teacher education students. If these two populations are comparable and the model replicates a similar factor structure, then this construct may be an additional variable for inclusion into exploratory models concerning teacher migration and professional departure.

The Protean and Boundaryless Constructs

Hall et al. (1996) suggested a construct for explaining the vast changes noted in employment trends. They focused on the adaptability of workers to change constantly to meet the demands of job loss, new training, and continual learning. Personal flexibility and an individually driven career path are emphasized in this model of career development. The individual is the focus in the protean career, as the protean careerist assumes responsibility for his or her own career development and embraces a mindset of continual evolution in skill building and moving across employment opportunities. In essence, the protean career model posits individuals are no longer governed by *corporate ladder mentality*, where one looks to organizations for linear career growth or career path definitions (Briscoe & Hall, 2006; Briscoe & Finkelstein, 2009). Cabrera (2009) referenced that the organization is a setting where individuals are presented the occasion to bring into line their career with their personal values, and thus, to convey personal values through work. Furthermore, the protean career orientation posits that self-directed individuals are proactive about managing career behavior such that they develop competencies that assure their employability (McArdle et al., 2007; Briscoe et al., 2012). Therefore, career success for such people becomes internal and psychological, and is indicated in a communicated meaning of achievement (Cabrera, 2009).

Arthur (1994) foretold the implications of the Boundaryless career in business and industry. He discussed how ridged organizational boundaries were showing signs of advanced decay with the entry of the global economy. Workers

were moving within industries from company to company and venturing outside the umbrella of the organizational framework, thus building independent networks of career opportunities. Arthur noted the construct of boundarylessness could be conceptualized as a set of attitudes and beliefs a person acquired to be free from organizational definitions. He supported these concepts with market information of worker migration, corporate decentralization, and continued job creation. These employment trends led Arthur to assert the global work force was developing a new set of attitudes about work, including being mobile and un-tethered to a lifelong career. Since Arthur, the boundaryless has been commonly recognized as a valuable tool for career theory and practice in an age where mobility and self-driven careers are a major focus of attention (e.g., Sullivan & Baruch, 2009; Rodrigues & Guest, 2010).

According to Briscoe and Hall (2006), combining the protean and boundaryless dimensions provides a more precise picture of the variety of contemporary career profiles. Both the Protean and Boundaryless career development models have empirical support (Segers, Inceoglu, Vloeberghs, Bartram, & Henderickx, 2008; Sullivan & Baruch, 2009). Briscoe, Hall, and Frautschy DeMuth, (2006) developed a measure to assess constructs of the Protean and Boundaryless models, citing the popularity of the Protean and Boundaryless constructs in theoretical work and recognizing the need for an empirical measure to explore theoretical tenets.

The Protean and Boundaryless Teacher

Reflecting on these constructs brings about the question of teacher candidates and whether or not they possess these career Protean and Boundaryless attitudes. As noted earlier, Johnson and Birkeland (2003) argued teacher candidates currently entering university preparation programs come to the profession with set of attitudes different from their predecessors. Johnson and Birkeland cited the different work context (Protean & Boundaryless) in which these candidates were raised, and the larger array of employment opportunities available to them outside of teaching. Those opportunities may include higher income and social status, as well as benefits such as adequately supplied and resourced work environments, developmental training for higher positions, and rapid advancement.

Rippon (2005) explored the question of teacher Protean and Boundaryless attitudes in Scotland. In a qualitative analysis, Rippon found two cultures predominated in the participants she interviewed. The largest and most powerful was the traditional *secure* culture, which identified with the status and independence of teachers in the classroom and included attitudes of resistance to change and mistrust and cynicism toward those individuals promoting change. Promotion was expected to take place in periodic steps based on length of experience, and deviation from those standards was seen as deleterious to the organization. The second culture, the *investment* culture, was growing in influence in the participant's organizations yet seen as a threat by the secure culture. The investment culture supported change via making a personal difference (Protean attitudes) in the work setting, encouraged teamwork, and often was involved in extracurricular activities (Boundaryless attitudes). This group was more willing to take risks and consider

jobs outside the traditional limits of education (Boundaryless attitudes) by using their teacher training in business and consultation opportunities (Boundaryless attitudes).

Okurame and Fabunmi (2014) also referenced that literature on protean and boundaryless does not provide a clear depiction of the role of gender in new career attitudes because gender studies within the context of PCO and BCO are sparse and inconclusive. The researchers noted a need for further studies to clarify the effects of gender on PCO and BCO career orientation. According to U.S. Department of Education (2012), public and private school teaching in elementary and secondary schools is an overwhelmingly female profession with 76.3% of the total population.

Given the evidence teacher candidates come to university training with a different set of attitudes than previous generations (Johnson & Birkeland, 2003), the outcomes of Rippon's (2005) research, and Okurame and Fabunmi's (2014) references on the need for additional studies evaluating gender with the protean and boundaryless constructs, we believe testing an instrument that measures the Protean and Boundaryless constructs with teacher candidates may result in helping to further research on teacher migration and career orientation.

Method & Results

Study 1: Exploratory Factor Analysis (PAF)

Participants and Procedures. Study one partcipants were undergraduate teacher education candidates recruited from several sections of an introduction to teaching class taken during the first year of admittance to the teacher education program at a mid-sized southern university in the United States. From the original number of invited participants (360), a total of (n=350) research packets were completed properly and used in the study. The sample included a gender distribution of (n=308) females and (n=42) males. There were (n=316) Whites, (n=26) African Americans, and (n=8) other races. The mean age of the participants was 21.76 years.

Recruiting took place in introductory education classes. Each participant received an envelope with the research instrument and demographics sheet enclosed, and was given approximately one hour to complete the packet. Data from the non-identifiable packets were used in the data analysis.

Measures: Protean and Boundaryless Career Scales (PBCAS). Hall et al. (1996) and Arthur (1994) developed the Protean and Boundaryless career concepts as models to explain the drastic changes in business and corporate structures of the late 20th century. In an attempt to quantify these constructs, Briscoe et al. (2006) combined these two models and created the Protean and Boundaryless Career Attitudes scales (PBCAS). Within the two separate but related scales, there are 27 items: 14 items concentrated on Protean Career Attitudes scales (PCAS) and 13 items on Boundaryless Career Attitudes scales (BCAS). Additionally, within each scale there are two subscales: a) items P1-P8 for Self-Directed Career Management (SDCM) and items P9-P14 for Values Driven (VD) in the PCAS; and b) items B1-B8 for Boundaryless Mindset (BM) and items B9-B13 for Organizational Mobility Preference (OMP) in the BCAS. The SDCM subscale signifies an

independence function in managing a career while the VD subscale denotes the level to which an individual's work behaviors are internally or externally influenced by values. Furthermore, the BM subscale designates the extent one perceives organizational boundaries as limitations and the OMP subscale displays the appeal of employment consistency within the same organization.

Respondents are instructed to rate each item based on a 5-point Likert response: 1) to little or no extent, 2) to a limited extent, 3) to some extent, 4) to a considerable extent, and 5) to a great extent. Raw scores are determined by totaling the response from each question. There are reversed scoring procedures for items B9-B13 of the OMP sub-scale. Briscoe et al. (2006) reported the following internal consistency numbers: SDCM (.81), VD (.69), BM (.89), and OMP (.76). Validity was supported by results from exploratory factor analysis using principal axis factoring (PAF) and direct oblimin rotation (DOR). A confirmatory factory analysis also was performed with a second sample, which verified the original factor structure. A third study examined validity using convergent validity methods, thereby providing further empirical support. The PBCAS, however, was tested by de Bruin and Buchner (2010) and found to have validity issues regarding the Values Driven scale and specific items. The authors performed several analyses and determined a five-factor model with two factors representing the VD scale best fit the data. Hence, de Bruin and Buchner called for more study of the instrument. All existing items were included to represent the original scales in this study.

Results. KMO (.848) and Bartlett's test [χ^2 (351) = 4198.290, p = .000] supported the conclusion the data were appropriate for factor analysis. The 27 items from the original PBCAS were factor analyzed using PAF and DOR. The original analysis yielded six components with eigenvalues greater than 1.0, accounting for 62.78% of the cumulative variance. Examination of the pattern matrix revealed the boundaryless mindset scales remained consistent, but the Protean Attitudes scales loaded on four scales (P8 – P11; P12 – P14 negative loading; P1; & P2 – P7). As with previous studies, the VD scale split onto two factors. Item P8 (a SDCM item) loaded with items P9 -P11 (VD scale). Additionally, item P1 loaded as an independent factor. This prompted us to explore the structure of the two scales (Protean & Boundaryless) independently before analyzing them together again, as suggested by de Bruin & Buchner (2010). The analysis identified specific items for removal and changes to the overall factor structure.

We then analyzed the two scales (Protean & Boundaryless Attitudes) together again. However, based on our previous analysis, we removed items P1 and P8. This analysis was not restrained by a specific number of factors and resulted in five eigenvalues over one. The five factors accounted for 61.27% of the total variance. Both the pattern (Table 1) and structure matrices indicated agreement on the factor loadings. Before conducting the second study, we calculated alpha coefficients for the scales (Table 1), which were in the moderate to high range, suggesting this model fit the data well.

Study 2: Confirmatory Factor Analysis

In study two, we sought to validate the PBCAS with a second sample of teacher candidates. For this study, we used confirmatory factor analysis (CFA)

procedures to investigate the factor structure of the instrument. The resulting five-factor EFA model from study one, with items P1 and P8 removed, was used as our hypothesized model for the CFA with the PBCAS.

Participants and Procedures. We surveyed (n = 212) teacher candidates in their final year of the teacher preparation program who were involved in the student teaching portion of their program. Of the original number of participants, (n = 194) completed the research instruments correctly. There were (n = 168) females and (n = 26) males. The race distribution included (n = 169) Whites, (n = 21) African-Americans, and (n = 4) other races. The mean age for this group was 22.94 years. Data was collected during an unrelated research study and the PBCAS was included in the research packet and completed by the participants. The PBCAS and a demographics sheet were removed from the packets and transferred to the first author for data entry, cleaning, analysis, and reporting.

Results. We used CFA from the AMOS software to test the factor structure. The results of the hypothesized model included a significant χ^2 (χ^2 = 477.125, p = .000) indicating that the model fit was poor. As a significant χ^2 is common with larger sample sizes (Byrne, 2010; Jöreskog & Sörbom, 1993), thus, we used additional fit statistics to evaluate the model. First, we examined the SRMR (.071) and found that this value was larger than specified for a well-fitting model (SRMR <.05; Byrne, 2010). Additionally, the GFI (.838), and the AGFI (.801) also indicated a less than adequate fit, while the results of the RMSEA value (.064; CI .055 to .074) indicated a moderate fit (Byrne, 2010).

Next, we turned to the standardized residual covariance matrix. Five values were found over the established (>2.58; Jöreskog & Sörbom, 1993) level for significance. This indicated items P7 (SDCM), B1, B2 (BM), B9, and B10 (OMP) all contributed to lowered model fit. We then viewed the modification indices and saw one high covariance in error terms (items B5 & B6). This indicated identifying one additional parameter might improve model fit. After covarying these two items, the RMSEA value was .058 (CI = .048 to .067.). Our findings from study two indicate a low to moderate fit, and suggest further investigation and revision to improve model fit.

Discussion

The purpose of this study was to investigate the factor structure of the PBCAS with teacher candidates in an effort to determine another significant variable contributing to teacher migration. We believe the PBCAS demonstrated moderate validity and internal consistency reliability with the teacher candidate data; however, remaining issues require additional study. In study one, we found a five-factor model best fit the data. Our model replicated the two major scales: Protean Career Attitudes and Boundaryless Career Attitudes proposed by Briscoe et al. (2005). We experienced a split in the VD scale and removed items P1 and P8 from the SDCM scale. When reviewing the VD scales items, there are qualitative differences that emerge between the scale questions. Items (P9-P11) refer to making career decisions based on personal priorities compared to other peoples' thoughts in general. Items P12-P14 refer to a direct conflict between the person's values and an employer's values. These qualitative differences

appear to be indicative of the split in the proposed VD factor. This result was present in the original study (Briscoe et al., 2005) and the follow-up study by de Bruin and Buchner (2010). The applicability of items P1 and P8 are also in doubt. Both of these questions asked participants to reflect on past employment. The mean age of our study 1 participants was 21.76 years. The questions may not represent our participants due to limited employment experiences.

The testing of the model in the second study demonstrated low to moderate fit. The items specified loaded well on the latent variables in most cases. The OMP scale indicated one low loading (Item B9; .47) and the BM scale followed with the second lowest (Item B1; .49). The most important issue facing the validity of the instrument is the splitting of the VD factor. This specific issue is important for the use of the scale in future research and practice. We speculate two specific constructs were represented, as the strong correlation between scales suggests a different latent variable may be involved.

Although the results indicate the scale has validity issues, there are aspects of this study that imply teacher candidates do possess Protean and Boundaryless attitudes. The SDCM scale, minus the removed items, is an important aspect of the protean career, and appears to assess this construct well. Even though the VD scale divided into two scales, each seems to have significant loadings that indicate a reliance on individual values in this sample. The BM scale indicates teacher candidates may possess attitudes signifying work and career are applicable across organizational boundaries and organizational limits may be artificial. This is important for school administrators to understand as more artificial structures may work against retaining teachers.

As teacher candidates transition into the profession, Protean and Boundaryless career attitudes may be used to survey the administrative environment of the school. By filtering employment experiences through these attitudinal schemes, new teachers may be assessing the fit between their personal attitudes and the work environment, looking for ways to contribute to the organization across boundaries, and taking responsibility for personal career development. Building opportunities for teachers to nurture these attitudes within the profession may be an important factor in retaining teachers.

Limitations and Further Research

There are specific limitations to this study. We limited our sample to current students. Replicating levels of teacher development beyond teacher candidates is needed to establish the PBCAS as relevant to the teaching profession, especially with the VD scale.

This study was designed to investigate the constructs of the Protean and Boundaryless career attitudes in teacher candidates. Given the research on teacher migration, serious attention must be steered toward factors that can explain and measure the phenomena. The Protean and Boundaryless constructs are important in helping to explain the attitudes of workers in the new economy. Applying these constructs to help explain teacher migration is a prudent application of these constructs. Perhaps teaching, as a profession, is accepting the Protean and Boundaryless concepts. If so, this has implications for policy makers and school leaders.

References

Arthur, M. B. (1994). The Boundaryless career - a new perspective for organizational inquiry. *Journal of Organizational Behavior*, *15*(4): 295-306.

Arthur, M. B., & Rousseau, D. M. (1996). *The Boundaryless career: A new employment principle for a new organizational era*. New York: Oxford University Press.

Briscoe, J. P., & Hall, D. T. (2006). The interplay of Boundaryless and Protean careers: Combinations and implications. *Journal of Vocational Behavior*, *69*(1), 4-18.

Briscoe, J. P., Hall, D. T., & DeMuth, R. L. F. (2006). Protean and Boundaryless careers: An empirical exploration. *Journal of Vocational Behavior*, *69*(1): 30-47. doi.10.1016/j.jvb.2005.09.003

Briscoe, J.P., & Finkelstein, L. (2009). The 'new career' and organizational commitment: Do boundaryless and protean attitudes make a difference? *Career Development International*, *14*(3), 242-260.

Briscoe, J. P., Henagan, S. C., Burton, J. P. and Murphy, W. M. (2012). Coping with an insecure employment environment: the differing roles of protean and boundaryless career orientations. *Journal of Vocational Behavior, 80*, 308-316.

Byrne, B. M. (2010). Structural education modeling with AMOS; Basic concepts, applications, and programming (2 ed). New York: Routledge.

Cabrera, E.F. (2009), "Protean organizations: reshaping work and careers to retain female talent", *Career Development International, 14*(2), 186-201.

de Bruin, G. P., & Buchner, M. (2010). Factor and item response theory analysis of the Protean and Boundaryless career attitude scales. *SA Journal of Industrial Psychology/SA Tydskrif vir Bedryfsielkunde*, *36*(2): 1-11.

Goldring, R., Taie, S., and Riddles, M. (2014). Teacher attrition and mobility: Results from the 2012–13 Teacher Follow-up Survey (NCES 2014-077). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved [10/15/14] from http://nces.ed.gov/pubsearch.

Hall, D. T. (1996). Protean careers of the 21st century. *The Academy of Management Executive*, *10*(4), 8-16.

Hall, D. T., & Associates. (1996). The *career is dead-Long live the career*. San Francisco: Jossey-Bass.

Henke, R. R., Chen, X., & Geis, S. (2000). *Progress through the teacher pipeline:1992-93 college graduates and elementary/secondary school teaching as of 1997*. Washington, DC: National Center for Educational Statistics.

Ingersoll, R. M. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal, 38*(3), 499-534.

Johnson, S. M., & Birkeland, S. E. (2003). Pursuing a "sense of success": New teachers explain their career decisions. *American Educational Research Journal, 40*(3), 581-617.

Jöreskog, K. G., & Sörbom, D. (1993). *Lisrel 8: Structured equation modeling with the Simplis command language*. Chicago, IL: Scientific Software International.

McArdle, S., Waters, L., Briscoe, J. P., & Hall, D. T. (2007). Employability during unemployment: adaptability, career identity and human and social capital. *Journal of Vocational Behavior, 71*(2), 247-264.

Okurame D. E., & Fabunmi R. (2014). Protean and boundaryless careers. *Career Development International, 19*(1), 73-100.

Rippon, J. H. (2005). Re-defining careers in education. *Career Development International, 10*(4), 275-292.Savickas, M. (2011). *Career counseling*. Washington, DC: American Psychological Association.

Segers, J., Inceoglu, I., Vloeberghs, D., Bartram, D., & Henderickx, E. (2008). Protean and Boundaryless careers: A study on potential motivators. *Journal of Vocational Behavior, 73*(2), 212-230.

Sullivan, S. E., & Baruch, Y. (2009). Advances in career theory and research: A critical review and agenda for future exploration. *Journal of Management, 35*(6), 1542-1571.

Super, D. E. (1990). A life-span, life-space approach to career development. In D. Brown, L. Brooks & Associates (Eds.), *Career choice and development: Applying contemporary theories to practice* (2nd ed., pp. 197–261). San Francisco, CA: Jossey-Bass.

U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey. (2013). "Public School Teacher Data File," 1987-88 through 2011-12; "Private School Teacher Data File," 1987-88 through 2011-12; and "Charter School Teacher Data File," 1999-2000.

Watt, H. M., & Richardson, P. W. (2007). Motivational factors influencing teaching as a career choice. Development and validation of the FIT-Choice scale. *The Journal of Experimental Education, 75*(3), 167-202.

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Table 1
Factor Loadings for EFA (PAF)& Alpha Coefficients for Calculated Scales

Factor α	F1 α = .905	F2 α = .855	F3 α = .722	F4 α = .793	F5 α = .736
Items					
B5	.862				
B4	.833				
B6	.823				
B2	.810				
B3	.796				
B7	.710				
B8	.586				
B1	.457				
B12		.826			
B13		.785			
B11		.777			
B10		.701			
B9		.583			
P10			.822		
P11			.572		
P9			.361*		
P6				.743	
P5				.714	
P2				.627	
P7				.558	
P4				.526	
P3				.498	
P12					-.733
P14					-.703
P13					-.560

Note. F1 = Boundaryless Mind Set; F2 = Organizational Mobility Preference; F3 = Values Drive 1; F4 = Self-Directed Career Management without items P1* and P8*; F5 = Values-Driven 2. α = Cronbach's alpha coefficient; *= Item did not load at minimum cutoff level.