An Investigation of Personality Traits in Relation to Job Performance of Online Instructors

Charles P. Holmes
Ashford University
charles.holmes@ashford.edu

Jeral R. Kirwan
Ashford University
jeral.kirwan@ashford.edu

Mark Bova
Ashford University
mark.bova@faculty.ashford.edu

Trevor Belcher
Ashford University
trevor.belcher@ashford.edu

Abstract

This quantitative study examined the relationship between the Big 5 personality traits and how they relate to online teacher effectiveness. The primary method of data collection for this study was through the use of surveys primarily building upon the Personality Style Inventory (PSI) (Lounsbury & Gibson, 2010), a work-based personality measure, was the instrument used to assess personality measures. In addition an evaluation instrument was developed by the researchers to evaluate classroom performance across a 10-point scale. In total 115 instructors from a large predominantly online university were surveyed through Qualtrics for personality traits and then had their courses evaluated for effectiveness and quality utilizing measures based on the Quality Matters program. Using a Pearson product moment correlation coefficient, it was found that 9 personality traits were significantly correlated with online teaching performance. While the results of this study can only be seen at this point as preliminary, it does open the door to further studies to determine if online teacher training or professional development interventions should take a different approach. Ultimately, the findings of this study demonstrated that personality does play a significant role in the effectiveness of online teaching performance.

Introduction

The manner through which students enrolled in postsecondary education programs attend class continues to evolve. Various methods for accessing courses have allowed higher education institutions to reach a wider audience (Park & Hee Jun, 2009). Along with this new learning modality, studies have been conducted that target the impact of the delivery method on areas such as student readiness and potential success (Waldner, McGorry, & Widener, 2012). Despite the wealth of studies into student performance, very little research has been conducted concerning the personalities and characteristics of online instructors. While these teachers may understand how to navigate the classroom, what role does their attitude play in regards to instructing and interacting with students? This paper will examine the influence that self-assessed personality traits have on instructor online performance.

Purpose Statement

The purpose of this study was to examine personality traits in relation to job performance ratings of

instructors in online modalities. Understanding the relationship between instructor personalities and classroom performance offers a number of potential benefits. Findings may be incorporated into University screening processes, which is particular relevance given the growing number of opportunities and applicants. They could also be used to align faculty with courses that best suit them, depending on the course delivery method. Another benefit can be found in the area of faculty development. Learning resources can be approached in a more specialized manner, so as to ensure that instructors are receiving relevant training that pertains to their specific needs. Improving upon the understanding we have of online instructors can lead to better training, which ultimately impacts student success.

Research Question

The research question examined in this study was how are the Big Five and narrow personality traits individually and jointly related to job performance for instructors in online modalities? In view of the preliminary nature of this study, directional hypotheses were not advanced.

Literature Review

There has long been an understanding that some people fit certain work environments better than others (Holland, 1997; Zunker, 1998). There are many inventories designed to help people find an occupation they would fit well in, such as the Strong Interests Inventory (2009). Inventories such as the MMPI (Butcher, 1994) were not developed to measure normal personality in occupational settings so caution should be used when using such tools to screen prospective employees (Butcher, 1994). Currently, the most commonly used inventories of normal personality are based on the Five Factor Model of Personality (also known as the Big Five).

Personality is commonly defined as a pattern of traits that can influence behavior across time and situations (Graziano & Eisenberg, 1997; Reimann & Zimbardo, 2011). An often debated issue in psychology is whether behavior is determined by situational/environmental factors or by internal factors, such as personality traits. For instance, Zimbardo (2007), a proponent of the situational approach, argues that the social context controls behavior more than personality and a person's values, beliefs, and past experiences. In contrast, Eysenck (1990), a proponent of the trait perspective, argues that personality is a stable pattern of traits, and that traits are consistent, enduring ways of thinking, feeling and behaving. The trait perspective implies that 'the situation' does not matter much and that roughly fifty percent of our personality traits are inherited. A compromise has been suggested by Mischel and Shoda (1995), social-cognitive theorists, who proposed the concept of trait-situation interaction. They argued that circumstances influence the extent to which and how a trait is expressed. Several meta-analytic studies have shown that personality measures are valid predictors of job performance in many occupations (Barrick & Mount, 1991; Ones & Viswesvaran, 2001; Salgado, 2002).

Personality continues to be a major area of research in the fields of education and psychology and is commonly defined as a relatively complex set of traits that influence behavior across time and situation (Graziano & Eisenberg, 1997; Zimbardo & Gerrig, 1996). The most commonly used taxonomy is the five-factor model (also known as the Big Five). The Big Five model has been found to be a robust and broad measure of normal personality (Tokar, Fischer, & Subich, 1998). Numerous studies have verified the factor structure and construct validity of the Big Five constructs of openness, conscientiousness, extraversion, agreeableness, and neuroticism (Costa & McCrae, 1994). The goal of the present study is to look at unique relationships between life satisfaction and both Big Five and narrow personality traits. Barrick and Mount (1991) conducted a meta-analysis of personality dimensions and job performance and found that traits are valid predictors in some occupations and environments. In another example, a study by Caligiuri (2000) shows that the trait Conscientiousness is positively-related to supervisor-rated job performance. One critique is that many criterion studies involving the Big Five and job performance may not take into account contextual performance (Hurtz & Donovan, 2000). Narrow traits are conceptually narrower in scope than broad, Big Five traits and can sometimes be components of Big Five. But narrow traits can also be

conceptually narrower (than the Big Five) traits, like Work Drive, which do not fit neatly into the Big Five taxonomy (Lounsbury & Gibson, 2010). There is a substantial body of empirical research supporting the idea that narrow personality traits can add significant, incremental validity to the Big Five personality traits in some settings and populations in predicting complex, real-world criteria including life satisfaction (e.g., Lounsbury, Saudargas, Gibson, & Leong, 2005), vocational interests (Van Iddekinge, Putka, & Campbell, 2011) and job performance (Rodrigues & Rebelo, 2013). Ones and Viswesvaran (1996) concluded that broad personality traits will have higher predictive validity than narrower ones. However, later studies have indicated that narrow traits can have stronger validities than broad ones (Ashton, 1998).

The present study is an instance of survey research whose primary goal (*a*) is to examine the relation between both broad and narrow personality traits and aspects of online teaching performance. Similar to the work conducted by Cranton (2004), we are attempting to measure the dimensions of authenticity in teaching. The usefulness of this research study is to fill a gap in the literature. Much of the existing research has focused on general personality characteristics of teachers related to the quality of teaching (Dodge, 1943; Thornton, 2006), how personality factors in student evaluations (Hart & Driver, 1978; Isaacson, McKeachie, & Milholland, 1963; Jenkins & Downs, 2001), effective problem solving skills and teacher competencies as they relate to personality characteristics (Baran, Correia, & Thompson, 2011). Although considerable research on effective instruction in the classroom exists, not much is known about the extent to which specific personality traits are related to effective online instruction. Most of the evidence regarding personality traits in the online environment focuses on students' personality patterns or subjective evaluation measures (e.g., students' evaluations of instruction received; Adams, 2012). The current study offers a different perspective by focusing on the link between personality characteristics of online instructors and classroom performance appraisal. Thus, the current study attempts to link online instruction to measures of performance evaluations often utilized in other disciplines. Implications for research and practice include several areas such as personnel selection, professional training and development, and appraising performance. This could lead to better retention and quality of teaching benefitting students.

Method

Overview

The data for this study came from instructors at a large institution of higher learning with predominately online programs. The data source represents a convenience sample chosen by the researchers because of the nature of the learning environment and availability of participants. All data were originally collected via Qualtrics (an online survey software provider). Due to confidentiality considerations, the identities of the individuals were coded anonymously. All data was collected between November 2013 to March 2014. Incomplete surveys were not included in this analysis.

Participants

Participants in the dataset for this study were 115 online instructors for a large university with predominately online student population across the United States. Of the total sample, 73% were female and 22% were male, and 1% self-identified as "other". Relative frequencies by age group were: 30 or younger (24%), 31-40 (35%), 41-50 (25%), 51-60 (12%), 60 and older (4%). More than 70% of the instructors indicated they had been teaching for more than two years online. Prospective participants were solicited by email invitation to participate in the study. Institutional Review Board permission to conduct this study with human subjects was given, and all subjects' data were kept confidential.

Measures

The Personality Style Inventory (PSI) (Lounsbury & Gibson, 2010), a work-based personality measure, was the instrument used to assess personality measures. The instrument has been used in a variety of international settings, primarily for career development and pre-employment screening, for which there is

extensive evidence of construct and criterion validity (Lounsbury, Gibson, & Hamrick, 2004; Lounsbury, Levy, Park, Gibson, & Smith, 2009). Each item of the PSI asks respondents to reply to questions on a five-point Likert-type response scale indicating level of agreement. Below is a sample item from the Extraversion scale.

I warm up quickly to others.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Personality traits. The personality measures used in this data source were adapted from the Personal Style Inventory (PSI) (for reliability and validity information, see Lounsbury & Gibson, 2010). A brief description of each personality construct examined is given below, along with the number of items in the scaleand internal consistency reliability coefficients(Cronbach's coefficient alpha: Nunnally & Bernstein, 1994).

Big Five personality traits

Agreeableness—is an individual's propensity for working well with a team and functioning cooperatively on group tasks (6 items; coefficient α = .75).
Conscientiousness—is a person's level of reliability, dependability, trustworthiness, and the inclination to follow norm and rules (8 items; coefficient α = .83).
Emotional Stability—an overall level of adjustment and the tendency to remain emotionally stable when faced with stress and pressures (6 items; coefficient α = .72).
Extraversion—a tendency to be outgoing, social, expressive, and talkative (7 items; coefficient α = .81).
Openness—receptiveness to novel ideas, change, innovation, and new learning (9 items; coefficient α = .77).

Narrow personality traits

Adaptability—the disposition towards adapting easily to new situations, accepting criticism, and taking advice (6 items; coefficient α = .83).
Self-Efficacy—tendency to complete tasks successfully, come up with good solutions, and handle tasks smoothly (5 items; coefficient α = .85).
Tough-Mindedness—the tendency to evaluation information, draw conclusions, and make decisions based on facts, logic, and data rather than feelings and intuition (6 items; coefficient α = .76).
Work Drive—disposition to work long hours, invest high levels of time and energy into work and career, and tendency towards extending oneself to meet deadlines and be productive (9 items; coefficient α = .83).

Performance measure

The basic assumption upon which the current research relies is that teaching is a behavior whose effectiveness can be accurately measured using a 10-item performance rating form. The criteria assessed using the form consisted of performance measures placed on a 10-point response scale from 1 = Performance does not exist to 10 = Single best performance I have observed or even hope to observe. The following 10 dimensions were assessed:

(1) The instructor's ability to foster critical thinking,
(2) The quality of online announcements,
(3) The instructor's relationship with their students, as assessed through discussion board interactions,
(4) The quality of discussion student feedback,
(5) The quality of grading student feedback,
(6) The instructors demonstrated expertise in the classroom,
(7) The instructor's expectations of the students,
(8) The quality of the instructor's weekly guidance,
(9) The instructor's attendance and timeliness of response,
(10) The instructor's use of various media throughout the course

Full-time faculty members familiar with the courses where instructors were evaluated utilized the performance measure to score each individual. Randomly assigned groups of three faculty members evaluated each individual to assure inter-rater reliability. The aggregated scores for each individual were then calculated as a single variable of job performance. Areas of examination were discussion post feedback, assignment feedback, direct instructor questions, quality of online announcements, and weekly assignment overviews (sometimes referred to as instructor guidance). We rated them on these criteria based on established organizational benchmarks (e.g. Quality Matters, etc.) with five being considered average performance.

Results

The first step in data analysis consisted of testing the relationships between the broad and narrow personality traits by correlating individual scores on the PSI with his/her ratings on the Performance Rating Form. Relationships between the personality variables and job performance criterion were computed using a Pearson product moment correlation coefficient, with results summarized in Table 1. Eight personality traits were significantly correlated with job performance, with Agreeableness being the only trait not significantly related. The top five factors were significant at the .01 level in the following order: Emotional stability ($r = .51$), Adaptability ($r = .42$), Tough-Mindedness ($r = .37$), Conscientiousness ($r = .29$), and Extraversion ($r = .24$).

Table 1
Descriptive Statistics and Intercorrelations for the Personality Variables

		1	2	3	4	5	6	7	8	9	10
1.	Adaptability	-	.69**	.67**	.66**	.72**	.72**	.72**	.65**	.64**	.42**
2.	Agreeableness		-	.68**	.53**	.75**	.67**	.69**	.61**	.63**	.12
3.	Conscientiousness			-	.49**	.74**	.72**	.79**	.57**	.81**	.29**
4.	Emotional Stability				-	.51**	.45**	.56**	.81**	.52**	.51**
5.	Extraversion					-	.72**	.79**	.64**	.67**	.24**
6.	Openness						-	.74**	.53**	.62**	.21*
7.	Self-Efficacy							-	.64**	.75**	.25*
8.	Tough-Mindedness								-	.55**	.37**
9.	Work Drive									-	.22*
10.	Job Performance										-
	M	4.17	4.44	4.44	3.99	4.42	4.39	4.43	4.10	4.32	5.90
	SD	.66	.51	.73	.54	.72	.57	.56	.55	.67	.90

$*p < .05, **p < .01$

To address the research question of the research question of how personality traits are individually and jointly related to job performance for instructors in online modalities, variables entering the prediction equation at a significance level of $p < .05$ were entered into the regression analysis in a stepwise fashion. As seen in Table 2, the Big Five traits of Emotional Stability and Agreeableness entered the equation first, followed by the narrow trait of Adaptability. Those three traits together accounted for 36% of the variance in job performance.

Table 2
Stepwise Regression—Job Performance

Step	Variable	Multiple *R*	*R2*	*R2* Change
1	Emotional Stability	.51**	.26**	.26**
2	Agreeableness	.55*	.30*	.05*
3	Adaptability	.60**	.36**	.05**

*$p < .05$, **$p < .0$

Discussion

Organizational researchers have shown the importance of personality in shaping dispositions towards work and career (McCrae & Costa, 1997). Personality has long been identified as a factor in career choice (e.g. Holland, 1976) and general and domain-specific life satisfaction (Lounsbury, Saudargas, Gibson, & Leong, 2005) though researchers have begun to recognize that personality also affects dispositions and functioning in the role one plays at work (Lounsbury, Steel, Gibson, & Drost, 2008).

Results from this study provide evidence for most of the Big Five traits, and some narrow traits, correlating with the Job Performance of online instructors. As expected, the present results indicate that the Job Performance measure used in this study was significantly correlated with eight out of nine personality traits studied. The significant, positive relationships between Job Performance and Emotional Stability are consistent with the findings of Lounsbury et al (2003) correlational findings of 5,932 individuals in 14 different occupational groups. Moreover, the results of the present study indicate the Emotional Stability and Agreeableness accounted for 30% of the variance in Job Performance, which provides additional support for the robustness of the Big Five (De Raad, 2000; McCrae & Costa, 2003).

It appears that additional variance in Job Performance of online instructors can be accounted for by some narrow traits. The results of the regression analysis indicate that the narrow trait Adaptability added significant incremental variance beyond the Big Five in predicting Job Performance. Moreover, the results of the regression analysis indicate that the narrow traits of Adaptability and Toughmindedness were in the top five traits that entered the equation, along with two of the Big Five traits: Emotional Stability and Agreeableness. At this point of research development, we would not conclude that any one of the traits in this study is more strongly related to Job Performance that any other, but the Adaptability—Job Performance relationship is a prime one for future study. Consistent with other studies that incorporate both the Big Five and narrow traits (Paunonen & Nicol, 2001; Kirwan, Lounsbury, & Gibson, 2010) we suggest that future research on the relationships between Job Performance and personality traits of online instructors include the full set of the Big Five as well as narrow traits of interest not covered we considered, to maximize validity.

Limitations

Although participants volunteered to participate in the survey process, the potential for personal bias in the results of their answers still exists. Additionally, each instructor was observed in just one previously taught course. Selected courses run for five and six weeks, which could increase the likelihood that certain personality traits would not be evident, when compared to a course that runs for a longer span of time. Courses that run for an extended period are also likelier to offer evidence of how a specific personality trait could influence a segment of the class.

Despite these areas of concern, the sample size is large enough to demonstrate the foundation for potential trends. Regarding participant bias, the survey was administered using language that worked to elicit honest reflections. Instructors were made aware of the fact that results would be anonymous, with the intention of receiving honest feedback. Furthermore, all courses that were reviewed belonged to experienced instructors. This was done with to mitigate the role that first-course stress can play on performance, specifically in regards to instructors who are new to this University's model. Also, the observations that took place were extensive, covering all aspects of instructor performance. This worked to reduce the risk that personality could impact performance in one area of the classroom and go unnoticed.

Future Directions

Future studies could be conducted with successive courses taught by each participant, in order to provide a more holistic view of teaching patterns. In addition, certain behavior types may also be targeted in additional surveys, if the results indicate promising correlations. Establishing singular patterns is a realistic outcome of future studies, provided the results of the hypotheses put forth in this work remain valid. Also, the results and methodology from this study could potentially be used in new faculty orientation programs or in the process of faculty hiring. Future research could extend in this direction to better determine what behavioral traits are desirable to foster in new online instructors. Studies such as this one have the opportunity to go in many different directions; it could become a longitudinal study to see if the results from this initial sample will improve as they continue to teach more in the online environment. Future studies could also examine other institutions that have a significant online component. While the faculty surveyed in this study come from all throughout the United States, that is not the case for some institutions and it could be worthwhile to determine if geography plays any role in the results. From a professional standpoint these results are quite interesting. If future testing demonstrates these results to be valid across other institutions it could add a whole new component to what could, and should, be offered at conferences geared towards online instructors. If outside vendors were able to develop methods for fostering or highlighting these attributes the hiring process for instructors could be completed reformed.

Conclusion

Due to the recent plateau and, in some cases, decrease in online student enrollment it is critical for all institutions who have online components to be aware of what personality traits and teaching styles are most effective in the online environment. While this study is far from all-inclusive, it does provide an insight into a potential growth area of study in regards to online teacher effectiveness. With the results of this study being in strong support of Lounsbury et al (2003) and their large study across 14 different occupations it does appear that there is a very real correlation between employee effectiveness and Job Performance and Emotional Stability. This makes sense in online learning modalities as instructors must be able to handle the stress related to self-regulation and dynamic schedules. Online instructors need to be flexible and considerate of the wide range of adult learners' needs and schedules, which requires a high level of adjustment and resilience in the face of pressure. While the trait Agreeableness was not significantly correlated directly with Job Performance, it is likely that narrow traits associated with the broader trait are. This makes intuitive sense as online instructors need to be helpful, cooperative, and cognizant of the varying levels of understanding and experience of adult learners. Further work needs to be done in regards to Adaptability and the strong correlations seen in this study. Notwithstanding the limitations and exploratory nature of our study, the findings do provide empirical support for the relationship between personality traits and job performance in online learning modalities. Ultimately, the relationship between personality traits and teaching performance can inform hiring practices, course assignments, and professional develop of instructors working in online modalities. Being able to provide a best fit of courses to instructors could help reduce course drop rates, improve instructor and student satisfaction, and increase overall retention. Hopefully, future research will help to illuminate the multiple connections of personality traits to Job Performance and assist administrators in identifying the best fit of instructors to courses.

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