

**PERSONALITY TRAITS AND CAREER CHOICE AMONG PRE-SERVICE
TEACHERS IN GHANAIAN COLLEGES OF EDUCATION: A STRUCTURAL
EQUATION MODELING APPROACH**

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Abstract

This study examined the influence of personality traits on career choice among pre-service teachers in Ghanaian Colleges of Education. Data were collected from 421 respondents using the Big Five Personality Test (BFI-20) and the Teachers' Career Choice Scale (TCCS). Analytical cross-sectional survey design and Covariance-Based Structural Equation Modelling (CB-SEM) were employed for data analysis. Results revealed that agreeableness was the dominant personality trait among pre-service teachers, followed by conscientiousness, openness, extraversion, and neuroticism. Personality traits significantly predicted career choice dimensions, with neuroticism emerging as the strongest predictor. The findings underscore the importance of considering personality traits in career counselling to guide pre-service teachers towards fulfilling careers. This research contributes to the understanding of factors influencing career choice in the teaching profession, particularly in developing country contexts like Ghana.

Introduction

Education does not only enable students to develop the ability to decide on their career choices but it also helps students to become successful in the pursuit of their careers. Besides, career choice involves many processes and is also influenced by several complex factors. Personality traits and self-efficacy are some of the key factors that influence learners' career choices and successes (Abe & Chikoko, 2020; Owino, 2017 & Ponce, 2018). Personality is a relatively stable precursor of behaviour; it underlies an enduring style of thinking, feeling and acting (Stryker, 2017). Further, personality is a predisposition to act or behave –characteristically in response to one's environment (Kuper et al., 2021). Even though it is not easy to identify individuals with all the characteristics that constitute their personalities, it is possible to develop various judgments based on the characteristics people demonstrate consistently.

The Five- Factor Personality Model has been used to classify personality characteristics. This involves an analysis of the words that individuals use to define themselves or others (Esteban-Guitart & Moll, 2014). The dimensions of the Five-Factor Personality Model are *extraversion*, *agreeableness*, *conscientiousness*, *neuroticism* and *openness to experience* (De Raad & Mlacic, 2015) one another.

De Raad and Mlacic (2015) have used five factors to explain the Big-Five Personality Model, with each factor categorized by groups of intercorrelated traits known as facets. The facets of Extraversion include warmth, gregariousness, assertiveness, activity, excitement seeking and positive emotions. The Agreeableness facets include straightforwardness, altruism, trust, compliance, modesty and tender-mindedness. Conscientiousness traits include competence, order, dutifulness, achievement-striving, self-discipline, and deliberation. Neuroticism or Emotional instability traits include anxiety, anger, depression, self-consciousness, impulsiveness,

vulnerability as well as the Openness to experience facets which includes fantasy, aesthetics, feelings, actions, ideas and values.

The Big Five Personality Model enjoys widespread theoretical and empirical support (McCrae & Sutin, 2018). For instance, Sun et al. (2018) have suggested that many personality psychologists have reached a consensus that the five personality constructs in the Model are necessary and sufficient to describe the basic dimensions of normal personality. Bui (2017) noted that the Big Five personality dimensions of neuroticism, extroversion, agreeableness, openness to experience and conscientiousness have been studied extensively and have been associated with a variety of work attitudes and behaviour. These five personality dimensions are broad dimensions that are theorised to subsume narrowly focused personality traits. The breadth of these dimensions is beneficial in that it distils a large number of personality traits into a parsimonious set of dimensions for use in research.

Research has also shown that career choice skills in everyday life are associated with certain decision-making styles. From a student perspective, Kazi and Akhlaq (2017) reported that students' interests are the main motivation for their career choices and that students are influenced by their interests when making career choices. Respondents acknowledged the impact of personality traits on their career decisions (Olaosebikan & Olusakin, 2014). They believe that personality traits can lead to a good career choice in advance. Personality traits are tendencies to think, feel or behave which are generally thought to be partly shaped by biological factors (Cervone & Pervin, 2022) and to be relatively stable over time and across situations, even allowing for changes in personality traits (Fajkowska & Kreitler, 2018; Meijerink-Bosman et al., 2022).

Five major traits have been shown to constitute the core dimensions of normal personality, and three of these Big Five traits in particular (neuroticism, extraversion, and conscientiousness) have been reliably associated with various career outcomes, such as levels of career choice (Penn & Lent, 2019) and decision problems or indecision (Martincin & Stead, 2015; Penn, 2016). The other two Big Five traits, agreeableness, and openness, tended to produce less consistent relationships with decision outcomes (Gallagher & Allen, 2014; Martincin & Stead, 2015).

Statement of the Problem

Teacher retention is a pressing concern globally (Geiger & Pivovarova, 2018; Papay et al., 2017), in countries like Ghana, due to its negative impact on students (Adnot et al., 2017; Allen et al., 2018; Bartanen et al., 2019; Sorensen & Ladd, 2020). Existing literature highlights the importance of initial commitment for teacher longevity (Darling-Hammond, 2017; Gist et al., 2019; Whipp & Geronime, 2017), emphasizing the need to understand pre-service teachers' commitment and satisfaction to improve retention. Moreover, identifying personality traits that predict success in teaching is crucial for teacher education, as not all individuals aspiring to teach possess the necessary qualities (Adebisi, & Oyeleke, 2018; Bressman et al., 2018; Chew & Cerbin, 2021; Souto-Manning, 2019; Stronge, 2018). Studies in Ghana indicate that teacher attrition is attributed to factors like lack of motivation and inadequate incentives, with little attention to the influence of teacher personality and self-efficacy (Danso et al., 2022). The decline in teacher status and increasing attrition rates underscore the urgency of addressing these issues to retain teachers in classrooms, especially considering the impact on students' education.

Despite extensive research on career choice, particularly in developed countries, there is limited focus on pre-service teacher career choice in developing countries like Ghana. Most existing studies primarily involve university or high school students and are conducted in developed economies, with small sample sizes (Agyemang et al., 2020; Amoako et al., 2020; Ansong et al., 2019; Atitsogbe et al., 2019; Bergmark et al., 2018; Chandrasekara, 2019; Shorey & Lopez, 2021). However, the unique environmental, socioeconomic, and cultural contexts of developing countries like Ghana suggest that factors influencing career choice may differ. Therefore, this study aimed to investigate whether personality traits influence the career choices of pre-service teachers in Ghana.

Research Question

1. What is the dominant personality trait of pre-service teachers in Colleges of Education, in Ghana

Hypothesis

1. H_0 : Personality traits will not statistically influence career choice of pre-service teachers in Colleges of Education in Ghana.
 H_1 : Personality traits will statistically influence career choice of pre-service teachers in Colleges of Education in Ghana.

Methodology

The study's design was an analytical cross-sectional survey (Thomas, 2022). Data were collected at a single point from multiple sub-groups, each of which had unique information to contribute to the study, making this design suitable for the study. The analytical cross-sectional survey allowed for the establishment of relationships and predictions among the variables under consideration. The analytical cross-sectional study design was adopted to examine the relationships between various variables, i.e., personality traits and career choice (Kesmodel, 2018). The study was quantitative in nature because the data were obtained using a questionnaire. Also, the analyses were carried out using descriptive and inferential statistics to draw conclusions.

Multistage sampling technique was used to sample 421 responders out of a population of 8622. This figure was based on Gay et al. (2012) suggestion that a population greater than 5,000 must have at least 400 respondents as a sample. Two instruments were used for data collection. First the Big Five Personality Test (BFI-20) (Gouvia, 2021), with a pre-test reliability of 0.80 was used to collect data on the personality traits of the respondents. The raw score of the domain is the sum of the 4 items in that column. The scores are calculated with the mean of the items that make up each factor: **Openness**: 5, 7, 14 and 18, **Conscientiousness**: 2, 3, 10 and 13, **Extroversion**: 1, 11, 12 and 17, **Agreeableness**: 4, 8, 9 and 19 and **Neuroticism**: 6, 15, 16 and 20.

The second instrument was Teachers' Career Choice Scale had 33 items under six dimensions. The dimensions were: Usefulness (8-items), educational interest (6-items), ability belief (5-items), social influence (5-items), little difficulty (4-items) and professional development (5-items). It had a pre-test reliability of 0.91. To help the analysis of the data, Research Question 1 was answered using Mean and Standard Deviation. This tool was used because it helped to establish the dominant personality trait among pre-service teachers in the public College of Education. The hypothesis was analysed using Covariance-Based Structural Equational Model (CB-SEM). The analysis

method was adopted since it allowed for the simultaneous estimation of numerous dependent variables, both endogenous and exogenous (Zhang, 2022).

Ethical Consideration

The management of the school provided a letter of approval for the study. In order to participate anonymously in the online survey, participants had to fill out an informed consent form in the first section of the e-questionnaire. Every participant received information on the study's objectives, the confidentiality of their answers and their right to discontinue participation at any moment without giving a reason. Additionally, students were given the assurance that declining to take part in the poll would not affect their academic status.

Result

Research Question 1:

What is the dominant personality trait of pre-service teachers?

The objective of this research question was to determine the dominant personality trait of pre-service. The statistical tool used to analyse the research question was the mean and standard deviation. The result is presented in Table 1.

Table 1: Distribution of dominant personality trait of pre-service teachers

Dimension	Mean	SD	Rank
Extraversion	12.20	2.10	4th
Agreeableness	13.75	2.03	1st
Conscientiousness	12.63	2.20	2nd
Openness	12.42	2.10	3rd
Neuroticism	12.01	2.45	5th

Source: Field Data (2021)

Mean and standard deviation were used to rank the dominant personality trait (Extraversion, Agreeableness, Conscientiousness, Openness and Neuroticism) among pre-service teachers in the public College of Education. It was realised from the data that the dominant personality trait was Agreeableness (M=13.75, SD=2.03), this was followed by Conscientiousness (M=12.63, SD=2.20). In addition, Openness (M=12.42, SD=2.10) was the third most dominant personality trait among pre-service teacher. The fourth dominant personality trait among pre-service teacher was Extraversion (M=12.20, SD=2.10) and the last dominant personality trait was Neuroticism (M=12.01, SD=2.45). The result indicated that out of the five traits Agreeableness was the most dominant personality trait while Neuroticism was the least dominant personality traits among pre-service teachers in the college of education.

Hypothesis 2: Personality traits will not statistically influence career choice of pre-service teachers

The objective of this research hypothesis was to determine the statistical influence of personality traits on career choice of pre-service teachers. The statistical tool used to analyse the research hypothesis was Covariance-Based Structural Equation Model (CB-SEM). This analysis produced a path model (fig. 1) and its resultant influence in Table 2.

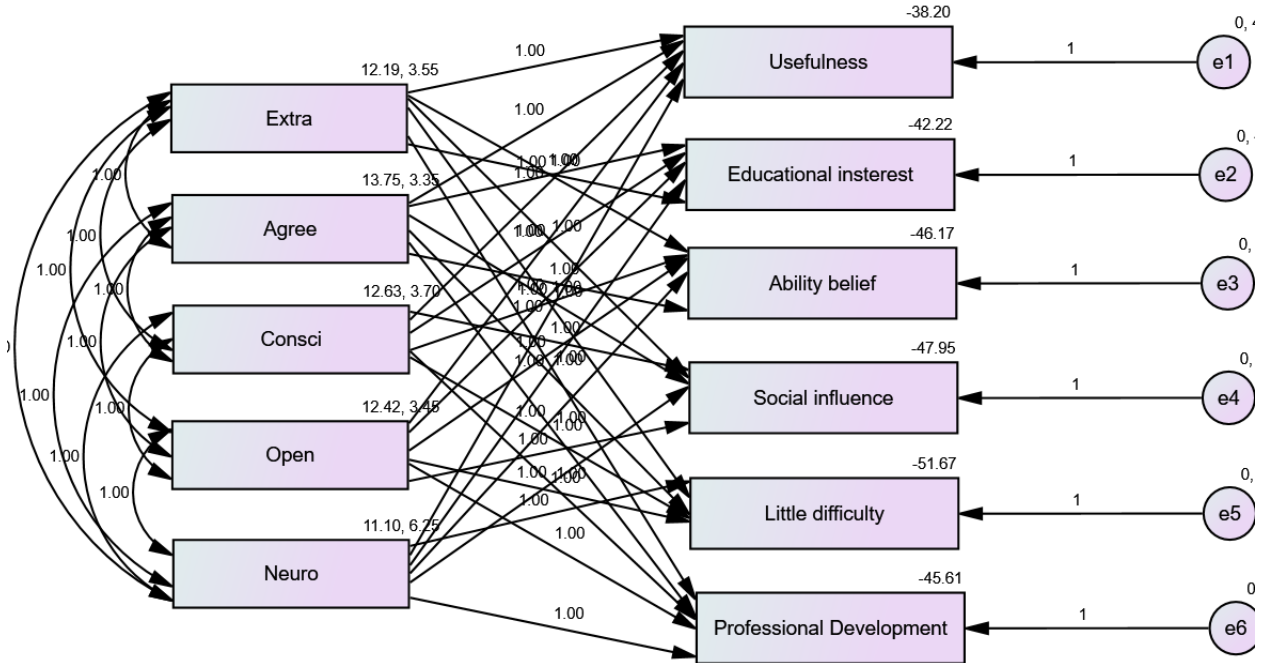


Figure 1: Path Model for Personality Traits versus Career Choice

Table 2: Personality traits predicting career choice of pre-service teachers

Personality Traits and Career Choice		Estimate	P
Usefulness	<--- Extraversion	.200	.000
Educational interest	<--- Extraversion	.205	.000
Usefulness	<--- Agreeableness	.194	.000
Ability belief	<--- Agreeableness	.198	.000
Educational interest	<--- Agreeableness	.199	.000
Social influence	<--- Conscientiousness	.200	.000
Social influence	<--- Openness	.193	.000
Professional Development	<--- Neuroticism	.267	.000
Little difficulty	<--- Neuroticism	.257	.000
Ability belief	<--- Extra	.204	.000
Social influence	<--- Extra	.196	.000
Little difficulty	<--- Extra	.193	.000
Professional Development	<--- Extraversion	.201	.000
Social influence	<--- Agreeableness	.190	.000
Little difficulty	<--- Agreeableness	.188	.000
Professional Development	<--- Agreeableness	.195	.000
Usefulness	<--- Conscientiousness	.204	.000
Educational interest	<--- Conscientiousness	.210	.000
Ability belief	<--- Conscientiousness	.208	.000
Little difficulty	<--- Conscientiousness	.197	.000
Professional Development	<--- Conscientiousness	.205	.000
Usefulness	<--- Openness	.197	.000
Educational interest	<--- Openness	.203	.000

Ability belief	<---	Openness	.201	.000
Little difficulty	<---	Openness	.191	.000
Professional Development	<---	Openness	.198	.000
Usefulness	<---	Neuroticism	.265	.000
Educational interest	<---	Neuroticism	.272	.000
Ability belief	<---	Neuroticism	.271	.000
Social influence	<---	Neuroticism	.260	.000

Source: Field Data (2021)

Table 2 shows the results on aspects of personality traits predicting career choice among pre-service teachers. The results revealed that all the exogenous variables predicted positively on the endogenous variables. Using usefulness as the endogenous variable, neuroticism predicted higher ($b = .265, p < .000$), conscientiousness ($b = .204, p < .000$), extraversion ($b = .200, p < .000$), openness ($b = .197, p < .000$) and agreeableness ($b = .194, p < .000$). Using educational interest as the endogenous variable, neuroticism predicted higher ($b = .272, p < .000$), conscientiousness ($b = .210, p < .000$), extraversion ($b = .205, p < .000$), openness ($b = .203, p < .000$) and agreeableness ($b = .199, p < .000$). In addition, with regards to ability belief of pre-service teacher as the endogenous variable, neuroticism predicted higher ($b = .271, p < .000$), conscientiousness ($b = .208, p < .000$), extraversion ($b = .204, p < .000$), openness ($b = .201, p < .000$) and agreeableness ($b = .198, p < .000$). That notwithstanding, with respect to social influence as a dimension of career choice, it was reviewed again that neuroticism predicted higher ($b = .260, p < .000$), conscientiousness ($b = .200, p < .000$), extraversion ($b = .196, p < .000$), openness ($b = .193, p < .000$) and agreeableness ($b = .190, p < .000$). A further analysis of the data reviewed that using little difficulty as endogenous variable, neuroticism predicted higher ($b = .257, p < .000$), conscientiousness ($b = .197, p < .000$), extraversion ($b = .193, p < .000$), openness ($b = .191, p < .000$) and agreeableness ($b = .188, p < .000$). Lastly, using professional development as the endogenous variable, neuroticism predicted higher ($b = .267, p < .000$), conscientiousness ($b = .205, p < .000$), extraversion ($b = .201, p < .000$), openness ($b = .198, p < .000$) and agreeableness ($b = .195, p < .000$). Analysis from the data showed that among the five dimension of personality traits, neuroticism predicted highest on the dimension of career choice.

Discussion

Findings showed that teachers exhibit trusting, affectionate, altruistic, and display prosocial behaviour as they practice. With this, teachers may experience positive emotions to their profession and are likely to show passion in it. The finding of the current study confirms that of Göncz (2017), who found out that a good teacher should be cooperative, willing to compromise, mild-mannered and benevolent with faith in mankind. On the other hand, the study contradicts the findings revealed by Aboud (2023), which showed that the traits of passion, patience, and cooperation were possessed most frequently in both male and female prospective teachers at elementary level where as creativity (Openness) proved to be more of a unique quality. In the view of the researcher, agreeableness trait is a very key trait that every pre-service teacher and teachers as a whole should have. As a teacher there is the need to cooperate with one another in the institution they found themselves. The teacher is part of a system and for the system to function well he/she needs to collaborate with others in areas of pedagogy, discipline, administration, among others.

The finding on hypothesis tested showed that personality factors of pre-service teachers in Ghanaian public Colleges of Education strongly influenced their career choice. Indeed, all personality traits strongly influenced the career choice score for teachers. A positive high value in neuroticism implies pre-service teachers who are higher in neuroticism tend to do well in environments that offer them safety and security, while allowing them space to breathe and express themselves. Some senior high school graduates prefer to go to the Colleges of Education because it offers them some level of job safety and security. Although sometimes posting to their various school delays, they are optimistic that so far as they attend the College of Education, they will be posted by the Ghana Education Service as compared to their mates who attended University. This finding is contrary to previous studies (Lounsbury, et al., 2012 & Meyer et al, 2014), which suggested that Neuroticism as a personality trait, is associated with a more general tendency toward career choice deficits.

However, the results of this research confirmed McKibben (2017), who found out that among university students, academic achievement is highly and positively predict neuroticism among those who are resilient enough to cope with its effects. Thus, one might use neuroticism's negative effects to motivate them to work toward improving their situation. Neuroticism does, however, definitely interact with other variables. According to Rostyslav and Vsevolod (2024), for instance, when intellect is high, the results of neuroticism may be very different than when these qualities are low. Even though extremely high neuroticism has clear disadvantages, people who are suited to succeed may find it to be a motivator for success in competitive industries (Shaygan, 2023). The ideal level of neuroticism would logically rely on specific geographical features as well as the individual's other characteristics. This is the case in this study which explains the study's findings exactly. As a result, one needed to be intelligent in order to enrol in college. Therefore, intellect makes up for the detrimental consequences of neuroticism even if a student possesses the trait.

Another personality trait that positively predicted career choice was conscientiousness. This implies that a pre-service teacher who has high level of conscientiousness is characterized by a propensity for order, goal-setting and systematic action. Higher conscientiousness may help one stay on task and avoid getting side-tracked by irrelevant information when goals have been established. Because they are more inclined to pursue career decisions in an achievement-oriented way, conscientious people are likely to meet less challenges in the process. This finding corroborates previous research showing that a tendency toward greater orderliness, self-discipline and dependability is associated with fewer career decision -making difficulties (Purnamasari, et al (2023). This may be because more conscientious people are more dedicated to career choice and do invest resources into the process. In addition to being knowledgeable and driven, they are also deliberate in their actions and rarely show indecision. They have an internal locus of control when it comes to making choices about their professional lives. They are less likely to lack work-related knowledge than others, perhaps because their level of thoroughness suggests they would actively seek out information and take appropriate counsel before making career decisions (Johnson, 2023)

According to Aşkun, et al. (2024), conscientiousness is the most important Big Five personality trait in predicting professional success. What this means is that people with persistent, conscientious personalities are less likely to be bothered by the presence of potential roadblocks to their freedom of choice and to pursue avenues to reconcile any conflicting advice or information they may have received. It is more likely that people will view such obstacles as exciting tasks to be met than as constraints.

The third personality trait that predicted career choice in this study was extraversion. This revealed that pre-service teachers of this trait are more extraverted and tend to be outgoing, confident, and easily excited. People who score highly on the trait of extraversion are more likely to actively seek out opportunities to interact with others. Exuding vitality, optimism, and enthusiasm, these people are frequently praised for their upbeat, optimistic demeanour. The finding is consistent with that of Page et al. (2008) which revealed a significant association between Extraversion and career choice. Although many studies have found a negative relationship between extraversion and career choice challenges, other research has found no such association (Page et al., 2008). One possible explanation for the discrepancy is that some professions (like teaching, social work and law) tend to attract people with high levels of extroversion, while others (like engineers and mathematic) seem to appeal more to people with low levels of extroversion.

In this study, openness showed up as a strong predictor of career choice. It implies that qualities like inventiveness, openness to new experiences, and a readiness to accept ambiguity are desirable in prospective teachers. This result is in line with Johnson's (2023) study, which discovered a favourable relationship between definite career choice and openness. People with high levels of openness demonstrate qualities like empathy, creativity and intellectual curiosity. They have a propensity to be more emotionally sensitive and are curious to learn about novel concepts and viewpoints. Since the study's participants are college students who are renowned for their adaptability and intellectual curiosity, their propensity for taking risks and making snap decisions about their careers fits with their openness. Since openness is associated with divergent thinking, it might be useful while making decisions about a career.

Lastly, agreeableness was the least positive predictor of career choice. This means that pre-service teachers who possess this trait have a soft heart and can be moved quickly to compassion. They can understand and empathize with others and have a high degree of emotional intelligence. This is a trait that every pre-service teacher should have because of the environment and the kind of people they deal with in their field of work. Studies have shown an inverse relationship between the agreeableness personality trait and career choice (Lounsbury et al, 2012). Conversely, some studies found that Agreeableness were associated with higher levels of emotional and personality-related career decision-making difficulties (Gati et al, 2019). Individuals who score high on the agreeableness scale are more likely to enjoy and excel in team settings (John et al., 2008), perhaps because their personalities lend themselves to mutual attraction, cooperation, conflict management, information sharing and goal compliance. The team as a whole benefit from these individuals' contributions (Peeters et al, 2006). High agreeableness persons may struggle in roles that need more autonomy and independence.

Conclusion and implication for career counselling

Data from the study revealed that agreeableness appears to be the dominant personality trait among pre-service teachers. It can be concluded that pre-service teachers exhibited some level of trust, altruism and compassion for pupils under their care. In the same vein, all personality trait predicted career choice of pre-service teachers. This points to fact that in the bid to help pre-service teacher make career choices, all dimensions of the individual should be given equal attention.

This research lends credibility to the claim that deciding on a career path is no easy feat, highlighting the importance of the counsellor's assistance. Nowadays, most students plan to switch careers several times throughout the course of their working lives and constantly hone their

existing set of abilities. If today's students are going to meet the demands of tomorrow's job market, it is crucial that they have access to a high-quality career counselling programme.

The results indicated that personality traits are reliable predictors of career choice. As a result, it is important to recognise, appreciate and account for the many traits of students. Counsellors would need to take the time to get to know each student and tailor their development accordingly. This necessitates a more person-centered approach in counselling. Likewise, counsellors will need to work with students to strengthen their less strong personality traits while building on their stronger ones in order to guide them towards fulfilling careers. The students' overall growth in terms of course selection and ultimately, professional growth, will benefit from this.

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