Changes in Beliefs towards Children, Personality, and Future Social Studies Teachers: An Analysis of Survey Data

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Abstract: *For many years, teacher education has focused on the centrality of the learner in the educational process. This study examined how preservice teachers' beliefs regarding children changed over the course of a teacher education program. It also examined the role of personality indicators in that change. Preservice social studies teachers were administered surveys in each year of a teacher education program to assess participants' beliefs towards children and their personality type. Participants' beliefs about children became more child-centered and personality type was a predictor of these beliefs.*

Key Words: teacher beliefs, teacher preparation, teacher personality, longitudinal analysis

Contemporary teachers work in classrooms of increasing diversity and must understand their students' backgrounds, learning preferences, and developmental needs in order to teach successfully (Larson, 2017). The latest version of the Model Core Teaching Standards (MCTS) which begins with an emphasis on the learner and learning. The MCTS begin by stating, "Teaching begins with the learner. To ensure that each student learns new knowledge and skills, teachers must understand that learning and developmental patterns vary individually" (Council of Chief State School Officers [CCSSO], 2011, p. 8). According to the MCTS, teachers work with learners to support individual student needs. There is a clear emphasis in the standards for teachers to adopt a more child-centered attitude towards constructing an effective learning environment.

University-based teacher preparation programs have taken on the role of preparing the vast majority of teachers in the United States (United States Department of Education, 2013). These teacher preparation programs seek to train pre-service teachers to practice effective teaching techniques and to develop professional dispositions that will support them throughout their careers. Empirical research is needed to understand how preservice teachers change consequential beliefs and practices throughout their programs.

This study sought to examine changes in one consequential belief system of social studies preservice teachers through their completion of a teacher preparation program. The degree to which preservice teachers adopt child-centeredness as a belief matters to their success as teachers

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(Jamil, Downer, & Pianta, 2012). As one of the traditional core subjects, this study focuses on future social studies teachers' beliefs about children. Additionally, it seeks to examine if beliefs are associated with a more stable individual attribute such as personality. These analyses will help show how preservice social studies teachers' change, how the changes are related to personality, and consider the implications for teacher preparation programs.

THEORETICAL FRAMEWORK

As individuals enter a teacher education program there are malleable and non-malleable characteristics of each person. While both malleable and non-malleable characteristics may influence preservice teachers' beliefs and practices, teacher education programs must focus on those characteristics that are malleable in their effort to prepare teachers for classrooms in K-12 schools. With limited time and resources, it only makes sense that teacher preparation programs would shape their programs around changing the beliefs and practices that are most efficiently changed and have the greatest impact on K-12 student learning.

Some characteristics of preservice teachers are obviously non-malleable. For example, gender or ethnicity are non-malleable and no reasonable person would suggest that a teacher education program try to change these. Preservice teachers also have past educational experiences that inform the way they make sense of classrooms (Lortie, 1975). Meanwhile, there is some debate over the malleability of measured personality among preservice teachers. However, the evidence seems to indicate that personality of preservice teachers is generally stable, and therefore non-malleable throughout teacher training (Wiens & Ruday 2014; Ripski, LoCasale-Crouch, & Decker, 2011; Robbins, Fraley, Roberts, & Trzesniewski, 2001).

On the other hand, preservice teacher knowledge of pedagogy, content, and pedagogical content can be malleable and impacted by preservice and in-service training (Borko, 2004; Chen, 2010). Preservice training can also affect preservice teacher instructional practices (Konold, et al., 2008). There is also evidence that teacher preparation programs can influence preservice teachers' beliefs, attitudes, and dispositions (Fives & Buehl, 2012). Given the malleability of these teacher characteristics, and the importance of them to student learning, it makes sense that teacher education programs focus the majority of their time on impacting these characteristics.

The teacher education research field benefits from empirical research that demonstrates the ability of programs to change malleable preservice teacher characteristics while confirming that these malleable characteristics are actually malleable. This study focuses on preservice social study teacher beliefs about child centeredness to determine if this belief changed through a teacher education program. It also examines the connection between a non-malleable teacher characteristic, personality, to understand if child centeredness is a malleable characteristic. This study builds on previous research but addresses a gap in the literature regarding social studies preservice teachers' beliefs about children.

REVIEW OF LITERATURE

Researchers have been interested in investigating the importance of teacher beliefs since at least the 1950s (Fives & Buehl, 2012). Buehl and Beck (2015) conducted an exhaustive literature review and demonstrated the complexity of teacher beliefs. They describe a model of teacher beliefs whereby beliefs are impacted by external factors (ex. classroom, school, district, and national factors) and internal factors (ex. other beliefs, teaching experiences, and knowledge) to

continual shape and alter belief structures (Buehl & Beck, 2015). Research has supported the categorization of preservice teacher beliefs as malleable and influenced by preservice teacher training (Brownlee & Chak, 2007; Isikoglu, 2008; Olson & Jimenez-Silva, 2008). Because novice teachers have less teaching experience their beliefs may be more subject to change and less connected to their enacted teaching strategies (Basturkmen, 2012). This makes it important for teacher preparation programs to understand how their programs may impact preservice teacher beliefs and what non-malleable factors may be important to consider in connection to these beliefs.

Beliefs, as well as attitudes, create dispositions that matter to effective teaching (Carroll, 2012). The MCTS points out dispositions indicate that, "habits of professional action and moral commitments that underlie the performances play a key role in how teachers do, in fact, act in practice" (CCSSO, 2011, p.6). The broad support of the importance of attitudes and dispositions can be seen in their prominent place in the Interstate Teacher Assessment and Support Consortium's (InTASC) Model Core Teaching Standards (CCSSO, 2011). The Council for the Accreditation of Educator Preparation (CAEP), the largest national accreditor of teacher preparation programs, also recognizes the importance of disposition development for preservice teachers (Council for the Accreditation of Educator Preparation, 2016). Carroll (2012) demonstrates the interactive nature of dispositions and actions. Beliefs and attitudes influence what occurs in the classroom, and classroom practices and teacher growth impact dispositions (National Council for the Accreditation of Teacher Education, 2002).

The topic of teacher beliefs is broad and contains multiple perspectives and definitions (Fives & Buehl, 2012). In fact, even though differences can be found in the literature that distinguish between them (Richardson, 1996), beliefs and attitudes are terms often used interchangeably. Less important for the purpose of this article is the difference between beliefs and attitudes, than is the importance of these constructs for impacting teaching. Empirical studies indicate that teacher attitudes are important indicators of teacher practices (Scott-Little, La Paro, & Weisner, 2006). In a study of 238 pre-kindergarten classes, Pianta and colleagues (2005) demonstrated a link between teacher attitudes and developmentally appropriate instructional practices. Additionally, Vartuli (1999) showed that beliefs impact instructional quality.

Within the social studies education literature there is some empirical research on the importance of teacher thinking, attitudes, and beliefs as being important to how teachers make instructional decisions (Adler, 2008, Hessberg, 2012). Social studies education scholars have examined teacher attitudes towards a wide variety of concepts including—among others—citizenship (Wilkins, 1999), civic education (Chin & Barber, 2010), multicultural citizenship (Matthews & Dilworh, 2008), and specific teaching strategies (Fehn, & Koeppen, 1998). Some scholars have taken a descriptive lens to examine core disciplinary beliefs such as theological certainly (James, 2010) and a justice orientation (Fry & O'Brien, 2015).
There is some evidence that social studies teacher education can influence teacher beliefs. Social studies preservice teachers have been shown to develop more favorable beliefs about learner-centered pedagogical approaches following specific training in those areas (Doppen, 2007; Yilmaz, 2008). Also, Fitchett, Starker, and Salyers (2012) found that following an innovative culturally responsive teaching model used in a social studies methods course, preservice teachers were more efficacious in their ability to use culturally appropriate instruction and teach in diverse contexts. However, preservice social studies teachers' pre-existing ideas about content and students can limit a change in their beliefs (Mathews & Dilworth, 2008). The research on preservice social studies teachers' beliefs continues to be thin and there is no research examining preservice social studies teachers' beliefs regarding child-centeredness. This study addresses this

gap in the literature by examining changes in preservice social studies teacher's beliefs about children.

CHILD-CENTEREDNESS: AN IMPORTANT ATTITUDE IN EDUCATION

Studying preservice teacher beliefs is complex; however, researchers have shown the possibility to identify individual beliefs constructs for analysis. Child-centeredness is one belief construct that has been shown to be important for teachers (Downer, LoCasale-Crouch, Hamre, & Pianta, 2009; Gursimsek & Goregenli, 2009). It is possible to view beliefs in a dichotomous way. While this may provide for false dichotomies in certain situations, it can be a useful tool for isolating certain, specific attitudes for research purposes. Schaefer and Edgerton (1985) suggest a dichotomy of child-centered versus traditional, or authoritarian, views towards children. This dichotomy dates to Dewey (1938) who helped develop an educational description of child-centered as "teacher flexibility, permissiveness, and encouragement of child initiative as contrasted to teacher direction and rigid control of the learning process" (Schaefer & Edgerton, 1985, p. 290).

The best learning environment is one where students feel comfortable and have the freedom to express themselves and take risks (Bransford, Brown, & Cocking, 2000). Teachers that display a high degree of sensitivity to learner needs and support their students can have a profound impact on learning (La Paro, Pianta, & Stuhlman, 2004). These teachers provide acceptance and safety, student choice, opportunity to connect the new to the known, and high expectations with appropriate challenges (Estes, Mintz, & Gunter, 2011).

Good teaching can be conceptualized as understanding the needs of individual learners (Burden & Byrd, 2010). This requires teachers to operate from a perspective of focusing on the learner needs and to move away from authoritarian approaches to instruction. Research also supports that learner-centered instruction increases student opportunities to learn (McCombs, 1997). Creating warm and inviting classroom environments has been shown to be an important part of increasing student learning (Pianta & Hamre, 2009).

In social studies, a similar emphasis on student centeredness has developed. There has been a rejection of what Friere (2000) called the banking method where students receive and store information with little input or action on their own part. Social studies educators employ many instructional strategies traditionally labeled student-centered strategies (Chapin, 2011). Examples of which include: problem-based learning/inquiry (Brush & Saye, 2008; Saye & Brush, 2007), simulations (DeLeon, 2008), discussions (Hess, 2010), and service learning (Serriere, Mitra, & Reed, 2011; Wade & Yarbrough, 2007). In addition to these specific instructional strategies, there is an emphasis on understanding the individual needs of students and adjusting the classroom environment, curriculum, and instructional approaches to meet the needs of the learners (CCSSO, 2011; National Council for the Social Studies, 2002). These approaches align with Schaefer and Edgerton's (1985) definition of child-centered teachers as those that focus on teacher flexibility, permissiveness, and encouragement of child initiative.

TEACHER BELIEFS AND TEACHER EDUCATION

For teacher educators, it is important to consider how attitudes that have been shown to be important among in-service teachers also pertain to developing preservice teachers. While attempting to address preservice teachers' attitudes, beliefs, and dispositions teacher education programs must acknowledge the established views these individuals have developed over years of

schooling in what Lortie (1975) calls the "apprenticeship of observation." Prospective teachers draw on their own academic interests as a model for how their future students' interests (Grossman, 1990). Research indicates that while teacher beliefs are relatively stable and tend to be associated with a consistent teaching style (Kagan, 1992), these beliefs can be changed by teacher training programs (Adler, 2008).

This apprenticeship of observation can be a potential obstruction to preservice teachers adopting more child-centered attitudes. Historically, teaching in the United States has been focused on teacher control with students memorizing or digesting the knowledge presented (Spring, 2008). This belief in the unquestioned authority of the teacher was challenged over a century ago by important Progressive thinkers such as Dewey (Pinar, Reynolds, Slatter, & Taubman, 1995). However, the authority of the teacher remains a dominant discourse in contemporary education (Buzzelli & Johnston, 2001).

Research indicates that, though it may be difficult, it is possible to challenge and change preservice teacher attitudes and beliefs through organizing preservice teachers into cohorts, creating connections between coursework and field experiences, service learning, and developing portfolios (Adler, 2008). Modeling and overcorrection can impact preservice English teachers' apprenticeship of observation (Grossman, 1991). Preservice teachers have been shown to change their foundational epistemological beliefs (Brownlee, Purdie, & Boulton-Lewis, 2001) and adopt a more constructivist view of education (So &Watkins, 2005).

Social studies teacher education programs and social studies methods courses have also been shown to change preservice teacher beliefs (Angell, 1998; Johnston, 1990). Doppen (2007) found that preservice teachers that participated in an intensive social studies teacher education program adopted more child-centered attitude towards pedagogy. Preservice teachers also demonstrated a change in beliefs towards a less objectivist approach to historical knowledge as a result of a teacher education program (Slekar, 1998).

This study builds on previous research in social studies teacher education in two important ways. First, it provides a longitudinal examination of preservice social studies beliefs over a three-year long teacher education program using a pre-test, post-test model. Second, this study compliments research mentioned here by employing quantitative methods which allow for comparison of previous case study examinations with survey responses of elementary and secondary preservice teachers over three cohorts.

This paper examines whether participation in a three-year teacher education program is associated with changes in future social studies teachers' beliefs towards children. Furthermore, it explores whether some preservice social studies teachers have non-malleable characteristics that predispose them to more authoritarian views towards children based on measurable personality characteristics.

PRESERVICE TEACHER PERSONALITY

Personality represents a non-malleable preservice teacher characteristic. However, that does not mean it is unimportant to teacher beliefs. In addition to educational experiences, preservice teachers' attitudes and beliefs are impacted by their religious, ethnic, and interpersonal relationships (Dedeoglu & Lamme, 2011). Teacher personality is an added influence on teacher attitudes and beliefs. In a case study of one elementary preservice teacher, Garmon (2004) discovered that attitudes related to diversity were connected to personality characteristics. In a larger study of 397 preservice teachers, Decker and Rimm-Kaufman (2008) found a strong connection between preservice teacher personality as measured by the five-factor model and

teaching beliefs as measured by the Teacher Belief Q-Sort (Rimm-Kaufman et al, 2006). Conceptually, the link between personality and belief systems may seem obvious. However, this connection has not been widely explored for preservice teachers and their beliefs about child-centeredness. There is need for more empirical research into this connection.

MEASURING BELIEFS AND PERSONALITY

Preservice social studies teacher beliefs about children are complex. Condensing these attitudes into a continuum of child-centered to authoritarian (Schaefer & Edgerton, 1985) provides a quantifiable tool for researchers to understand and analyze attitudes. This approach has yielded useful empirical results and contributed to the literature. Jamil, Downer, and Pianta (2012) examined survey and teaching performance data of 509 preservice teachers in the last year of their preparation program and examined the relationship between personality, self-efficacy and beliefs about children. They found a relationship between beliefs towards children and self-efficacy but did not find an association between beliefs about children and extraversion or neuroticism (Jamil et al., 2012). In a study of in-service teachers, Downer, LoCasale-Crouch, Hamre, and Pianta (2009) found that teachers' attitudes towards children impacted how responsive they were to an online professional development program . Preservice and in-service teachers that tend towards authoritarian views also tend to value power and achievement as compared to individuals who are more child-centered (Gursimsek & Goregenli, 2009). There is a need in the literature for more examination of the connection between personality and beliefs about children, particularly among preservice teachers. There is no research in this area among preservice social studies teachers.

Personality, as measured by the five-factor model (Costa & McCrae, 1991), has been shown to be correlated with teaching beliefs (Decker & Rimm-Kaufman, 2008). Exploring the connection between personality and beliefs may shed further light on this connection and provide teacher educators an additional tool for understanding future social studies teachers.

In the past several decades an empirical strategy has taken prominence in measuring and identifying personality types. Research in this field has led to the creation of the "Big Five" structure of conceptualizing personality (Costa & McCrae, 1991). The five factors include neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. Ripski, LoCasale-Crouch, and Decker (2011) describe the factors as follows:

> Neuroticism is characterized by negative emotions, such as anxiety and low self-esteem. Extraversion is defined by being sociable and assertive. Those individuals high on openness tend to be curious and imaginative. Persons with a high degree of agreeableness are sympathetic and easily moved. Finally, conscientiousness is characterized by a high degree of responsibility and determination. (pp. 78-79)

The NEO-Five Factor Inventory (NEO-FFI; Costa & McCrae, 1991) has become a popular instrument for assessing personality in a variety of settings.

With this understanding of how to conceptualize measurement of the important, potentially malleable belief of child-centeredness and the non-malleable characteristic of personality, we can examine the following research questions:

1. Do beliefs regarding child-centeredness change over the course of a three-year teacher preparation program?

2. Are preservice social studies teachers' beliefs about children related to their personality?
3. Are changes in preservice social studies teachers' beliefs about children predicted by their personality?
4.

The participants and analysis in the following section provides evidence to address these questions.

METHOD

PARTICIPANTS AND SETTING

Data were collected at a mid-Atlantic university's school of education over five years. The university is considered a "most selective" national university by U.S. News and World Report (U.S. News, 2017). Participants in this study were preservice teachers in a five-year bachelor's plus master's degree program. Students enter the teacher education program in the third year of their undergraduate program. Participants completed survey data each year beginning in their third year of the undergraduate degree and continuing through the fifth year of their five-year program. Students in this program complete an undergraduate major in an area outside of the school of education while completing course work towards a Master of Arts in Teaching.

Both elementary education specialists as well as those pursing an endorsement in middle and high school socials studies were included in the study. In this university context, the elementary education students and the secondary education students complete parallel, but separate, programs in teacher education. While there is some overlap in education coursework, the majority of the pedagogical courses these two groups take are different. However, both programs support the use of high-leverage, learner-centered pedagogies. The key textbooks used in the programs are *Instruction: A Models Approach* (Estes et al., 2011), the elementary social studies textbook was *Social Studies Alive: Methods to Transform Elementary Instruction* (Teachers' Curriculum Institute, 2010b), and the secondary social studies methods course used *Bring Learning Alive! Methods to Transform Middle and High School Social Studies Instruction* (Teachers' Curriculum Institute, 2010a). The Teacher Curriculum Institute (2010b) materials offer "an effective alternative to the traditional, teacher-centered classroom" (p. 6). While this is not curricular analysis of the courses, selection of these resources does provide an indication of the pedagogical approaches valued by course instructors.

This paper reports on 86 participants from three cohorts of students that each completed the surveys at the beginning and end of their programs. The preservice teachers in this study are all preparing to teach social studies at either the elementary or secondary level. In total 79% of participants were elementary education students and 21% were pursuing licensure in secondary social studies. Of the 86 total participants, 54 were majoring in social science disciplines with eighteen specifically majoring in history. Our sample was 91% female with 9% male. Meanwhile, 79% of the participants identified themselves as Caucasian with 9% Asian, 6% African American and 6% in other racial categories or unspecified.

Data for this study were collected as part of a larger data gathering effort supported by the university's teacher education department (Wiens, 2014). Preservice teachers complete online surveys in the spring semester each year they are enrolled in the teacher education program. Participation in research activities is required by the teacher education department, but specific participation in any survey is voluntary and the preservice teachers may elect to complete alternative assignments. When participating in each survey, the preservice teachers also consent

to have data from each survey connected via an anonymous identification number to other administrative and survey data collected by the teacher education department.

INSTRUMENTS

Modernity Scale. The preservice teachers' beliefs about children were measured using the Modernity Scale (Schaefer & Edgerton, 1985). The Modernity Scale (see Appendix) differentiates between more traditional adult-centered, or authoritarian, views and more progressive child-centered views. The scale consists of sixteen items that ask participants to indicate their preference on a five-point Likert scale from 1 - Strongly Disagree to 5 - Strongly Agree.

The Modernity Scale was originally developed by Schaefer and Edgerton (1985) as a measure for assessing parental attitudes towards child rearing. More recently, however, the Modernity Scale has been used by researchers to understand teachers' beliefs about children (see Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002; Mashburn, Hamre, Downer, & Pianta, 2008; Scott-Little et al., 2006). The Modernity Scale is also recently begun to be used to examine beliefs towards children among preservice teachers (Jamil et al., 2012).

All sixteen items in the Modernity Scale were combined to create a single composite score for each administration of the survey. Cronbach's alpha was computed as a measure of internal consistency with each year showing sufficiently high consistency for research purposes: Year 1 α = .78; Year 2 α = .71; and Year 3, α = .78. The strength of internal consistency, combined with the authors' recommendations, supported using a single factor for analysis of the Modernity Scale mean scores.

Personality Measure. Future social study teachers' personalities were measured using the Neo Five-Factor Inventory (NEO-FFI) which identifies five personality factors: neuroticism, extraversion, openness, agreeableness, and conscientiousness (Costa, McCrae, & Dye, 1992). Participants responded to sixty items on a scale of 1-Strongly Disagree to 5-Strongly Agree where higher responses indicated an inclination to that personality type. Items from the different factors included "I often feel inferior to others," (neuroticism); "I like to have a lot of people around me," (extraversion); "I often try new and foreign foods," (openness); "Most people I know like me," (agreeableness); and "I keep my belongings neat and clean," (conscientiousness). The NEO-FFI has been generally accepted as a measuring demonstrating strong validity and reliability and has been used in different research settings (see Riemann, Angleitner, & Strelau, 1997; Saucier, 1998; Judge, Heller, & Mount, 2002).

Stability of preservice teacher personality (Ripski et al., 2011; Wiens & Ruday, 2014) supports using NEO-FFI data only for the final year of the three-year teacher education program to understand if personality predicted preservice teacher attitudes towards children. In this sample, measures of consistency for each factor were: neuroticism, α = .89; extraversion, α = .81; openness, α = .71; agreeableness, α = .84; and conscientiousness, α = .89.

ANALYSIS

Analyses for this study were conducted in stages. First, analysis of the data was conducted to determine the amount of missing data present in the dataset. Following the examination of the data, analysis was conducted to address the primary questions of the study. This began with an examination of change in preservice teacher beliefs regarding child-centeredness and followed by a regression analysis of preservice teacher personality and their beliefs regarding child-centeredness.

Analysis of missing data showed that 75% of the individual question-level items in the Modernity Scale were missing no data. Of the missing data, the range was from 1.2% (missing one case) to 2.3% (missing two cases). The NEO FFI was missing slightly more data. All of the question-level items were missing some data. The missing cases ranged from 1.2% (missing one case) to 4.7% (missing four cases). Missing values were imputed using the SPSS Statistics version 24 statistical package. Individual item-level missing cases were imputed using the expectation maximization procedure with maximum iterations of 25. The items were then composited into the outcome variables described in the previous section.

After addressing the issue of missing data in the dataset, an analysis of change in the Modernity Scale was conducted. This was accomplished using a paired-samples *t*-test analysis of the Modernity Scale survey. The survey results provided from preservice teachers first year in the teacher education program constituted the initial value. This was compared with the final survey results taken from the final semester of the five-year teacher education program.

Following the examination of change in beliefs over time, analysis was conducted to examine the relationship between personality and beliefs about child-centeredness. A regression equation was conducted using final-year beliefs towards children as the outcome variable with the five personality factors as predictors.

Finally, an analysis of change in attitudes was conducted by subtracting the final measure of the Modernity Scale from the initial measure. This new variable was then used as an independent variable in a regression equation where the personality factors were entered as predictor variables thereby providing an indication if personality also impacts the degree to which preservice social studies teachers change their beliefs over time.

RESULTS

Prior to presenting the results of the analysis it is important to remember that *lower* numbers on the Modernity Scale indicate more child-centered views. Preservice teachers in this sample had a mean score on the Modernity Scale of 2.43 and standard deviation of .51. The minimum score provided was 1.31 with a maximum of 3.69. On the final administration of the modernity scale, the sample mean was 2.23 and a standard deviation of .49. The minimum score at the end of program was 1.38 and maximum of 3.38. The paired samples *t*-test indicated a significant difference in survey results from the beginning to end of the teacher education program ($t = 4.097$, $df = 85$, $p < .001$).

Regression analysis showed that the five personality traits were significantly related to preservice social studies teachers' beliefs regarding children at the end of their teacher preparation program ($F = 3.63$, $p = .005$). Results of the first regression analysis are shown in Table 1. The adjusted R square for the model was .134 meaning that 13% of the variance in preservice teacher beliefs about children is explained by the five personality factors. While the entire model was significant, the only individual predictor that was statistically significant was Agreeableness (Standardized $\beta = -.306$, $p = .028$). This indicates that preservice social studies teachers that rated themselves higher on the agreeableness factor were the most child-centered in their beliefs regarding children.

Table 1
Personality as Predictor of Attitudes Towards
Children

Predictors	Std. ß
Neuroticism	-.014
Extraversion	-.085
Openness	-.190
Agreeableness	-.306*
Conscientious	.092
R Square Change	.185*
Final adjusted R^2	.134*

*p < .05

In order to conduct the final analysis a new variable was created by subtracting the initial Modernity Scale result from the final result. The mean of the new variable was .21 and standard deviation of .46. The greatest decrease in score was .94 while the greatest increase in score was 1.31. When the personality traits were regressed on the new variable the model was significant (*F* = 3.183, *p* = .011). The final adjusted R square for the model was .114, which indicates that 11% of the change in beliefs about children is explained by the five personality factors. Results of the analysis are shown in Table 2. The only individual predictor that was significant was Neuroticism (Standardized *ß* = -.296, *p* = .025). In this analysis a higher change score indicates a movement towards more child-centered views. The analysis indicates that preservice teachers that were higher in neuroticism were more likely to develop more authoritarian views. Discussion of these results will occur in the following section.

Table 2
Personality as Predictor of Change in Attitudes Towards Children

Predictors	Std. ß
Neuroticism	-.296*
Extraversion	.096
Openness	-.154
Agreeableness	.186
Conscientious	-.127
R Square Change	.166*
Final adjusted R^2	.114*

*p < .05

DISCUSSION

This paper examined both a malleable and non-malleable characteristic of preservice social studies teachers. Data in this study examined if preservice social studies teachers changed in their beliefs about child-centeredness and how they changed. It also examined if these beliefs were connected to the non-malleable preservice teacher characteristic of personality. Finally, it examined the connection between change in preservice teacher beliefs about children and their personality. This study demonstrated that preservice teachers did change their beliefs in accordance with their teacher education program, that their beliefs are somewhat related to their personality, and that personality can predict which teachers may be more likely to adopt more child-centered views.

Previous research has connected teacher training to changes in teacher beliefs (Brownlee et al., 2001; So &Watkins, 2005). Yet, other research indicates the difficulty in changing preservice beliefs that have been developed over many years (Mathews & Dilworth, 2008). The preservice teachers in this study were amenable to changing their views to being more child-centered. This is in line with much of the research on preservice teacher beliefs. It builds on previous research by presenting longitudinal quantitative data and extends the examination of change in beliefs to social studies preservice teachers. The changes in participants' beliefs in this study seem to be in line with the desired results of the teacher preparation program as evidenced by course materials and with commonly adopted standards such as MCTS (CCSSO, 2011) and NCSS Standards (2012).

Findings in this study support earlier work by Decker & Rimm-Kaufman (2008) connecting personality to teacher beliefs. Personality was found to be predictive of participants' views of children. However, whereas Decker and Rimm-Kaufman (2008) found nearly all of the five personality factors connected to teacher beliefs, the associations were narrower in this data. The preservice teachers that defined themselves as agreeable were more likely to have positive views of children. Since, teachers' beliefs about children have been shown to also be related to their uptake of professional development (Downer et al., 2009), this is a key finding. This may indicate that the very preservice teachers that need more support to develop child-centered views may be the least likely to buy-in to the training.

Building on the finding that more agreeable preservice social studies teachers were more child-centered in their beliefs was the finding that more neurotic participants were least like to change their views towards child-centeredness. Preservice teachers may need to change their beliefs before they change their practices (Fives & Buehl, 2012). Therefore, equally important to the beliefs that preservice teachers have towards children may be their flexibility in those views (Richardson, 1996). Analysis in this study indicated that certain preservice teachers may be more likely to change their views based on their personality. As child-centeredness has been a desired quality in a teacher since Dewey (1938), it is important for teacher preparation programs to understand how different preservice teachers may adopt or resist these beliefs.

LIMITATIONS

This study does contain some important limitations. First, while analyses do indicate a change in future social studies teachers' attitude towards children, it does not attempt to explain these changes. It is not possible to examine the mechanisms for change using the analysis described in this paper. Nor does it attempt to link the specific attributes of the teacher preparation program to the changes in preservice teacher attitudes. Future research will need to be conducted in order to more fully understand the how and why of changes in attitudes during a teacher preparation program.

The study is also bounded by its sample and context. The participants are all enrolled in one teacher education program at a highly selective university which places limits on the generalizability of the results to other contexts. Preservice teachers enrolled in this particular university may tend to distinct personality types and attitudes compared to other teacher education programs. Further, comparative research would need to occur to understand how representative the data in this study is to other future social studies teachers.

Schaefer and Edgerton (1985) present one method for quantifying attitudes towards children. We acknowledge that attitudes are complex and the Modernity Scale offers a narrowly defined version of that construct. This study does not hope to explain the entirety of preservice

social studies teachers' attitudes towards children. Instead it offers analysis of one way to quantify the construct in ways that are useful for measurement and analysis.

CONCLUSION

Teacher preparation programs should be aware of the connection between personality and views on children. Certain individuals may be predisposed to more authoritarian views towards children and may need for social studies teacher education programs to scaffold training to aid them in understanding the importance of child-centered instruction.

As Scott-Little, La Paro, and Weisner (2006) point out, beliefs matter. This paper draws attention to one aspect of future social studies teachers' beliefs about child-centeredness – that they can change – and its connection to personality. This research supports efforts of teacher education programs to emphasize instruction in beliefs with these future teachers to adopt dispositions that may contribute to better instructional practices.

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APPENDIX

MODERNITY SCALE (SCHAEFER & EDGERTON, 1985)
1. Since parents lack special training in education, they should not question the teacher's teaching methods
2. Children should be treated the same regardless of differences among them
3. Children should always obey the teacher
4. Preparing for the future is more important for a child than enjoying today
5. Children will not do the right thing unless they must
6. Children should be allowed to disagree with their parents if they feel their own ideas are better*
7. Children should be kept busy with work and study at home and at school
8. The major goal of education is to put basic information into the minds of the children
9. In order to be fair, a teacher must treat all children alike
10. The most important thing to teach children is absolute obedience to whoever is in authority
11. Children learn best by doing things themselves rather than listening to others*
12. Children must be carefully trained early in life or their natural impulses will make them unmanageable
13. Children have a right to their own point of view and should be allowed to express it*
14. Children's learning results mainly from being presented basic information again and again
15. Children like to teach other children*
16. The most important thing to teach children is absolute obedience to parents
* – *Indicates this item is reverse coded.*