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Motivational Differences Throughout Teachers' Preparation and Career

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Abstract

Teacher motivation is an impact aspect of the teacher performance and thus student achievement. Given the varying degrees of responsibility, tasks, and obstacles over the course of a teacher's training and career, their motivation is likely to change over time. This study examined the motivational differences of pre-service teachers (PSTs), early, mid, and late-career teachers, as well as differences between early childhood, middle grades, and secondary teachers. Using the Factors Influencing Teacher Choice (FIT-Choice) model of teacher motivation, we found significant main and interaction effects. Motivation was generally highest in pre-service and early childhood teachers; it was lowest in early career teachers with no significant differences between mid- and late-career teachers. These findings have important implications for teacher retention, particularly in early career teachers when they are especially vulnerable to stress and attrition.

Introduction

Teacher motivation has grown in popularity in recent years (Watt & Richardson, 2008). This area of research is important as teacher motivation influences teachers' actions in the classroom and student achievement (Richardson & Watt, 2008). It is essential to understand how teacher motivation differs at different career stages as teachers face many changes in their professional, home, and personal lives, from the beginning of their careers as pre-service teachers (PSTs) to the time they retire in order to keep them engaged in their profession. All of these changes directly affect their motivation, values, and ability to perform their job successfully. Most research on differences in teacher motivation by career stage has focused on teacher efficacy, that is teachers' beliefs about their abilities in certain areas (Richardson & Watt, 2008; Tschannen Moran & Woolfolk Hoy, 2001). Less is known about how teachers' values for teaching and their motivation to entering into and persisting in the field differs at various stages of their professional training and career. Therefore, this study addresses the question: How does teacher motivation for teaching differ at different stages of teachers' training and career?

Literature Review

Teacher motivation is a small but growing area of educational research. Previous research has found that when teachers feel more motivated they demonstrate greater planning and organization, more openness to new ideas, a willingness to experiment with new teaching methods, and greater persistence in working with struggling students (Thoonen, Sleegers, Ort, Peetsma, & Geijsel, 2011). Teacher motivation also has an impact on student outcomes (Bal-Tastan, Davoudi,

Masalimova, Bersanov, Kurbanov, Boiarchuk, & Pavlushin, 2018; Lam, Cheng, & Ma, 2009; Skinner & Belmont, 1993). For example, Midgley, Feldlaufer, and Eccles (1989) found that teacher efficacy was positively related to student efficacy and negatively related to students' perceptions of task difficulty in math. Furthermore, studies have found that teacher motivation has an impact on student achievement. For example, Goddard, Hoy, and Hoy (2000) found that collective teacher efficacy was positively associated with student achievement in reading and math.

Interestingly, there is little research available about how and when teachers' motivation changes over the course of their career. That which does exist is either atheoretical (e.g., Day & Gu, 2007) or focuses on changes in teachers' efficacy (e.g., Klassen & Chiu, 2010). Klassen and Chiu (2010) found that three domains of self-efficacy (classroom management, instructional strategies, and student engagement) increased from early to mid-career, and then fell. Recently, there have been calls for greater theoretical rigor in studies of teacher motivation, out of which the Factors Influencing Teacher Choice model was developed (see below; Watt & Richardson, 2007). Although studies specifically studying differences in teachers' motivations for teaching have been sparse, there are a number of studies that provide clues as to how motivation for entering and persisting in teaching may differ by career stage. In the following section we describe social and contextual factors that may influence teachers' motivation at various career stages.

Early social influences on decision to pursue teaching. Various motivational influences contribute to teachers' decision to pursue a teaching career. These motivations emerge from parents, siblings, extended family, role models, interest in a subject, and other social influences (Richardson & Watt, 2006; Watt & Richardson, 2007, Watt & Richardson 2008; Watt, Richardson, & Wilkins, 2014). For example, an individual may choose teaching because one of their parents is a teacher or someone in their direct social network may have emphasized the value and importance of a teaching career (Mariscal & Delgado, 2016). Or, according to Heinz (2015) and Manual & Hughes (2006) an individual may choose teaching in order to teach a specific content area they enjoy or enjoyed learning about (Book & Freeman, 1986). Alternatively, an individual may choose not to pursue a teaching career because of the perception that teaching is a less prestigious and lucrative career than other potential options (Watt, Richardson, Klusmann, Kunter, Beyer, Trautwein, & Baumert, 2012). Therefore, social influences and previous/current interests could have either a positive or negative impact on the motivation of someone who wants to pursue a teaching career.

Motivation in teacher preparation. Teacher preparation also presents an opportunity to assess teachers' motivation as they begin training for their career. Traditional teacher preparation programs (i.e., four-year university teacher preparation programs, which do not include alternative teacher preparation program such as Teach for America) often consist of three parts: introductory education classes, content specific methods classes and field observations, and student teaching.

Introductory education courses consist of setting the environmental and disciplinary context for new PSTs (Feiman-Nemser, 1989). For example, in a college or university in an urban context, PSTs might be required to take introductory courses on the anthropology and sociology of urban education and educational psychology, as was the case for the PSTs in the current study. Carinus and Fokkens-Bruinsma (2013) explains that PSTs' motivation at the beginning of their teacher preparation program—when students begin taking these introductory education classes or are participating in field experiences—is still relatively unknown, thus giving the current study greater

importance. Furthermore, Carinus and Fokkens-Bruinsma (2013) explain that PSTs demonstrate higher motivation—especially in terms of giving back to society or altruism—prior to becoming student teachers.

Following introductory courses, PSTs move to methods courses, generally taken during junior year. These courses consist of pedagogical training and field observations in the PST's concentration area. For example, if a PST is pursuing a teaching certification in Early Childhood Education (ECE), they may learn how to teach engaging lessons in literacy, mathematics, science, and social studies for that age group. PSTs get their first experiences of the classroom in their methods classes, practicing their nascent pedagogical skills and/or observing in-service teachers (ISTs). We hypothesize that motivation during this period will be high but could decrease as PSTs become more familiar with the realities of the classroom (Carinus & Fokkens-Bruinsma, 2013).

The capstone experience for teacher preparation programs is often student teaching, the clinical experience in which PSTs generally participate at the end of their program to complete their teaching credential. At the university where we collected the PST data, as well as in many other traditional teacher education programs in the United States, field experiences are interwoven throughout the teacher education program. Structuring a teacher education program in this way allows students to gain real-world experiences earlier in their programs and prior to student teaching, which can make a difference in PSTs' "practices, confidences, and long-term commitment to teaching" (Darling-Hammond & Bransford, 2007, p. 411). During student teaching, PSTs teach in a classroom under the supervision of a cooperating teacher. Having the cooperating teacher in the classroom supports these students' experiences and provides an environment that aids in their professional development. The cooperating teacher is responsible for mentoring the student teacher and modeling effective classroom behavior and etiquette (Cuenca, 2011). However, if during the supervised teaching experience, the cooperating teacher does not offer effective scaffolding, student teaching could simply act as a "utilitarian" experience where students' perspective of teaching becomes a means to an end (Tabachnick & Zeichner, 1984, p. 13). Student teaching should not be a means to an end; rather, student teaching should function as an experience where PSTs learn to properly integrate into the classroom based on parameters taught by their teacher preparation program. Depending on the positive or negative outcome and the practicality of the experience of the PST during their student teaching apprenticeship, he or she might notice increases or decreases in motivation (Roness & Smith, 2010).

Early years in the field. The first five years of teaching tend to be the most difficult and are also the time during which most attrition occurs (Ingersoll 2001, 2012; Ingersoll & Smith, 2003). Researchers estimate that 30-50% of teachers leave the profession within the first five years (Hanna & Pennington, 2015; Ingersoll, 2012). During their first years of teaching, ISTs are often tasked with responsibilities and student issues that extend beyond teaching (Darling-Hammond, 2006). ISTs are now responsible for additional paperwork not specifically related to teaching (e.g., individual education plans or IEPs), school bureaucracy, the shock of being solely responsible for a classroom (Kim & Cho, 2014), a lack of professional development (Darling-Hammond & Sykes, 2003), curriculum changes (Darling-Hammond & Sykes, 2003; Center for Exceptional Children, 2000), and other phenomena that could add additional stress. We hypothesize that these stressors could result in decreases in satisfaction, and as a result, lower motivation (Boe, Cook, & Sutherland, 2008; Darling-Hammond & Sykes, 2003; Ingersoll, 2001). Moreover, these decreases in motivation can lead to burnout (Brown, Davis, & Johnson 2002; Skaalvik & Skaalvik, 2007) and anger towards students in their classes (Riley, Watt, Richardson, & De Alwis, 2012).

Mid- to late-career teachers. Research has identified a "sweet-spot" after the initial five-year period where teachers' intention to leave the field decreases (Ingersoll 2001, 2012). This could be a result of increased mentoring, professional development, or more effective induction practices as individuals gain more experience (Ingersoll & Strong, 2011). As ISTs progress through their career, they may become more comfortable in their surroundings (Ferguson, Frost, & Hall, 2012). Various sources suggest that it takes approximately five years to become truly confident in one's teaching ability (Ingersoll, 2012; Ingersoll, Merrill, & May, 2014, Klassen & Chiu, 2010). After the initial five-year period, we hypothesize that teachers may have greater motivation and heightened sense of self-efficacy in their teaching career (Ingersoll, 2012; Klassen & Chiu, 2010).

Despite lower rates of attrition after that first five-year window, motivation can also decline in mid-career teachers. Much of their attrition is due to burnout and anxiety, which may result from different sources (e.g., from administrators, students, parents, a heavy workload, lack of acknowledgment for accomplishments, etc.; Klassen & Chiu, 2010). These negative aspects of teaching can lead to increases in job stress, which may lead to drops in job satisfaction, and often attrition. Based on the aforementioned research, we hypothesize that a teacher's motivation to enter the workforce is at its highest point during the teacher preparation program.

Theoretical Framework

As mentioned above, there have been calls for greater theoretical grounding in the study of teacher motivation. One such theory was developed by Richardson and Watt (2006) and Richardson and Watt 2007) in their application of Expectancy-Value Theory (EVT) to teachers' motivation for teaching. The Factors Influencing Teaching Choice (FIT-Choice) model is a model of teacher motivation based on and adapted from EVT (Eccles, Adler, Futterman, Goff, Kaczala, Meece, & Midgley, 1983; Eccles & Wigfield, 2000. Below we describe how EVT was adapted and used as the foundation for the FIT-Choice model.

Expectancy-value theory. Eccles and colleagues' (1983) states that the EVT model is a four component developmental model of motivation that considers an individual's choices and performances. The robustness and applicability of this model has made it very common in education research. The first component of the EVT model pertains to the impact of an individual's environment on their choices, in this case their choice of profession. This component considers family demographics, an individual's exposure to gender stereotypes, their socializers' beliefs and behaviors, and their previous achievement related experiences.

The second component of the model is derived from Attribution Theory (Weiner, 1985) and concerns individuals' perceptions of loci of control. Locus of control refers to what an individual attributes their success or failure (Weiner, 2005). For example, someone with an internal locus of control attributes their success or failure to their own effort or ability, whereas an individual with an external locus of control attributes their success or failure to some aspect of their context and/or environment. The logic of this model states that an individual's perceptions of their environment, which have been reinforced over their lifetime, directly affects the development of an individual internal/external attributions patterns (i.e., whether they attribute their success and failures to factors internal to themselves, or external in their environment). This part of the model mediates the third component of the model, which is the creation of an individual's self-schemas, identity, long/short-term goals, self-concept of ability, and affective memories. These internal/external attributions patterns then help create the mental patterns (i.e., goal and identity development) that predict certain choices and performance on a task.

The fourth component of the model is the culmination of the first three components. It explains how an individual's motivation to achieve on a task is affected by the value they place on a task and their expected success at a task. These two parts of the model (i.e., values and expectations of success) make up the key predictive components for choice and performance on a task. It is necessary to note that subjective task value is comprised of four subcomponents, which are central to the development of the FIT-Choice model. These subcomponents consist of intrinsic value (i.e., an inherent enjoyment of a particular task/subject), attainment value (i.e., the importance of a task/subject to one's identity or self-perceptions), utility value (i.e., the usefulness of a task/subject for future goals), and relative cost (i.e., what is the cost associated with a particular choice or task?). In summary, an individual's motivation is predicated on social and environmental influences couple with psychological development based on the internalization of these influences. These factors influence what individuals value, which will lead to choices, in the case of this study, that is career choice.

To test EVT, Eccles, Wigfield, Flanagan, Miller, Reuman, and Yee (1989), Eccles Wigfield, Harold, and Blumenfeld (1993), and Eccles, Wigfield, and Schiefele (1998) examined differences between male and female students' motivation and their choices of academic subjects. Their findings found that males tend to have higher self-perceptions of ability in more masculine activities (i.e., sports and mathematics), whereas females tend to have higher self-perceptions of ability in more feminine activities (i.e., reading and English). In terms of subjective task values, Eccles & Wigfield (1995, 2000) found that females tended to value English more than males, whereas the opposite was true for mathematics. Thus, an individual's self-perceived ability beliefs and the value an individual places on a subject are motivating psychological factors that the authors hypothesize are learned from one's environment (e.g., gender and cultural stereotypes) and that have been reinforced over time. This same logic has then been adapted and applied to developing the motivation to teach. Though the current study does not specifically assess the motivation to teacher based on gender, this study does, however, examine how an individual's self-perceptions and values related to teaching are motivating factors for pursuing a teaching career.

The FIT-Choice model. The FIT-Choice model is a contextualized version of Eccles and colleagues (1983) and Eccles and Wigfield's (2000) EVT model. As in EVT, the FIT-Choice model starts by examining the background influences on an individual as it relates to developing the motivation to pursue teaching. These background influences include an individual's prior teaching and learning experiences (i.e., teachers as role-models, inspirational teachers, and positive learning experiences), social influences (i.e., friends, family, and colleagues who supported the individual becoming a teacher), and social dissuasion (i.e., people in an individual's social network who discouraged pursuing a teaching career and encouraged pursuing other careers).

The FIT-Choice model states that an individual's background characteristics would then affect the development of the motivational components found in the FIT-Choice model. The FIT-Choice model has four motivation components that directly affect an individual's decision to teach. First, Watt and Richardson (2007) describe an individual's perceptions that they have the abilities suited to becoming a teacher. This component is similar to the self-concept of one's ability to do an academic task found in Eccles and colleagues' (1983) and Eccles and Wigfield's (2000) original EVT model.

Second, the values component is also similar to the four sub-components of subjective task values in the original EVT model. According to Watt and Richardson (2007), the value components in the FIT-Choice model consist of intrinsic career value (i.e., an interest/enjoyment

in the teaching profession), personal utility value, and social utility value (i.e., contextualized versions of utility value that assess the personal usefulness of teaching [e.g., more time for family] and the social usefulness of teaching [e.g., positively shaping students' futures]).

The final components of the FIT-Choice model are fallback career (i.e., pursuing teaching after previously pursuing another career), task return (e.g., teaching offers a high social status, high morale, and a good salary), and task demand (e.g., teaching is a profession requiring specialized knowledge, a heavy workload, and emotional demands; Watt & Richardson, 2007).

The Present Study

This study seeks to understand how PST's and early-, mid-, and late-career ISTs' motivation differs over the course of a teaching career. As mentioned, teachers' motivations were assessed using Richardson and Watt's (2006) FIT-Choice model and scale.

The following research question guided the current study: How does teacher motivation differ throughout teacher training and career? We hypothesize that teacher motivation and values will demonstrate significant group differences based on the point in a PST's or IST's career. The Authors' (2018) and Watt and Richardson's (2007, 2008) previous research has demonstrated how pre-service teachers' motivations differ by academic teaching level (i.e., what grade-level they are certified to teach) and predicted teachers' persistence, satisfaction, pursuit of leadership positions, and professional development opportunities. The current study adds to the FIT-Choice research by examining the motivational differences among a cross-section of teachers at different stages of their teaching career.

Methods

Participants

Participants consisted of 558 PSTs and ISTs from a large, urban city in the northeastern United States. PSTs were selected from a large university, whereas ISTs were selected from schools within the city's public school district. The sample consisted of 71% female, 73% White, 16% Black, 5% Asian, 4% Latino, 3% Other, and 1% Native American. The mean age for the sample was 24.74 (SD = 6.59). 40% of the sample were PSTs, 20% early-career ISTs (i.e., 1-5 years teaching), 24% mid-career ISTs (i.e., 6–10 years teaching), and 21% late-career ISTs (i.e., 10+ years teaching). Fifty-nine percent taught (or were being trained to teach) ECE, 16% taught (or were being trained to teach) middle grades (4th–8th grade), and 25% taught (or were being trained to teach) secondary (7th–12th grade).

Measures

Participants answered 13 items from the short-form version of the FIT-Choice scale (Richardson & Watt, 2006). The scale included items measuring values, ability beliefs, pursuing teaching as a fallback career, and social influences that motivated PSTs and ISTs to choose a teaching career. All items contained the stem "I chose to become a teacher because…" and were anchored on a seven-point Likert scale ranging from 1 - "not important at all" to 7 - "extremely important." For example, a mean score of 5.5 on a variable would show a high value for that variable. Sample items include "...a teaching career is suited to abilities" (self-perceived teaching abilities) and "...teaching makes a worthwhile social contribution" (social utility value).

Validity information. The FIT-Choice measure contains single item constructs (i.e., ability beliefs, intrinsic career value, fallback career, and interest in content) and multi-item constructs (i.e., personal utility value, social utility value, and social influence) that were derived from the original 56-item FIT-Choice measure. Validity information for the short-form FIT-Choice measure has yet not been reported in print. However, studies using the long-form version of the FIT-Choice measure have been validated cross culturally in various countries (see Watt & Richardson, 2014.

During a personal communication from December 18, 2017, Richardson and Watt explained that:

> In terms of content validity, we selected highest-loading items per factor and considered them conceptually as to whether they best represented each construct, which we decided they did. We then correlated each selected item with its latent score (indicated by all component items in the regular scale) to check they correlated highly, which they did.

The short-form FIT-Choice scale provides sufficient psychometric properties to warrant using the measure based on this communication. As such, we used confirmatory factor analysis (CFA) to assess the fit of the data to the measure. We present the fit statistics and correlations in the results section.

Procedures

The second author collected PST data in-person during PSTs' methods, introductory, and student teaching seminar classes. The first author collected IST data through an online survey as part of a project funded by the William Penn Foundation (grant #46-15) assessing teachers' motivation to teach and persist in the field. The data was then aggregated based on the aforementioned 13 FIT-Choice scale items. Both components of the study received institutional review board approval from the authors' university.

Data analysis procedure. First, we conducted a CFA to determine model fit. The CFA included single items as well as multiple-item latent factors (Gardner, Cummings, Dunham, & Pierce, 1998; Wanous & Reichers, 1996; Wanous & Hudy, 2001). Following the CFA, composite variables were created based on the multi-item latent constructs in the FIT-Choice model. The latent constructs include: personal utility value (three items), social utility value (four items), and social influences (two items). Third, to assess group differences, we conducted multiple univariate analysis of variance (ANOVA) models. These analyses allowed us to see group differences between PSTs and ISTs and interactions with academic teaching level. Lastly, we conducted Bonferroni simple effects analyses to gain insight into the specific statistical differences between academic teaching level and career stage group.

Results

CFA. Table 1 shows the fit statistics for the CFA. Model fit for the CFA approaches acceptable fit. Table 2 shows the bivariate correlations for the single items and multi-item factors. Correlations follow the theoretical assumptions of the relationships between variables, as well as findings from prior research. For example, we found a non-significant negative relationship between intrinsic career value and fallback career ($r = -0.07$). Table 3 shows standardized factor loadings for the measure, which demonstrate significant loadings for all non-single item latent constructs.

Table 1. *CFA Model Fit Statistics*

Statistic	x^2	*df*	*CFI*	*TLI*	*RMSEA*	*SRMR*
Value	166.57	48	0.92	0.88	0.07	0.05

Table 2. *Correlations for Dependent Variables*

	Personal utility value	*Social utility value*	*Social influences*	*Ability beliefs*	*Intrinsic career value*	*Fallback career*	*Interest in content*
Personal utility value	1						
Social utility value	0.13**	1					
Social influences	0.39**	0.19**	1				
Ability beliefs	0.21**	0.15**	0.23**	1			
Intrinsic career value	0.08	0.18**	0.08	0.42**	1		
Fallback career	0.35**	-0.04	0.21**	0.01	-0.07	1	
Interest in content	0.14**	0.19**	0.25**	0.19**	0.18**	-0.02	1

** *Significant at p < .01*

Table 3. *Standardized Factor Loadings*

Factor/Item	*β*	*SE*
Personal Utility Value		
Teaching will be a secure job	0.63	0.03
Teaching hours will fit with family responsibilities	0.82	0.03
Job flexibility	0.8	0.03
Social Utility Value		
Teaching will allow me to influence the next generation	0.7	0.03
Teaching will allow me to work against social disadvantage	0.64	0.03
Teachers make a worthwhile contribution	0.85	0.03
I want a job that involves working with children/adolescents	0.4	0.04
Social Influences		
I have had good teachers as role-models	0.43	0.06
I chose to become a teacher because other people think I should become a teacher	0.77	0.1
Ability Beliefs		
A teaching career is suited to my abilities	-	-
Intrinsic Career Value		
I like teaching	-	-
Fallback Career		
I was unsure of what career I wanted	-	-
Interest in Content		
The subject/s that I will teach interest me deeply	-	-

Descriptive statistics. Descriptive statistics and reliabilities for the multi-item constructs are presented in Tables 4, 5, and 6. Table 4 includes descriptive statistics for each dependent variable, Table 5 includes each career point, and Table 6 includes each certification level. The reliability (based on Cronbach's alpha) of the social influences sub-scale was below an acceptable level (α = 0.46) and was therefore dropped from future analyses.

Table 4. *Descriptive Statistic for Dependent Variables*

Dependent Variables	*N*	*Mean*	*SD*	α
Ability beliefs	557	5.50	0.89	-
Intrinsic career value	553	5.76	0.62	-
Fallback career	552	2.51	1.71	-
Interest in content	556	5.42	1.05	-
Personal utility value (composite)	556	4.00	1.49	.79
Social utility value (composite)	557	5.58	0.65	.70
Social influences (composite)*	558	4.88	1.22	.46

** Dropped from analysis because of low reliability*
- Denotes single item factors

Table 5. *Descriptive Statistic for Career Point*

Career Point	*N*	*Mean*	*SD*
Pre-service			
Ability	198	5.49	0.83
Intrinsic career value	197	5.80	0.56
Fallback career	197	2.83	1.75
Content interest	199	5.66	0.71
Personal utility value (composite)	199	4.33	1.34
Social utility value (composite)	199	5.64	0.53
Social influences (composite)*	199	5.45	0.83
Early-career (1–5 years)			
Ability	108	5.57	0.73
Intrinsic career value	108	5.81	0.50
Fallback career	107	2.37	1.70
Content interest	108	5.27	1.14
Personal utility value (composite)	108	3.63	1.50
Social utility value (composite)	108	5.48	0.77
Social influences (composite)*	108	4.74	1.29
Mid-career (6–10 years)			
Ability	134	5.46	0.96
Intrinsic career value	131	5.68	0.70
Fallback career	132	2.17	1.56
Content interest	133	5.18	1.24
Personal utility value (composite)	133	3.87	1.50

Career Point	*N*	*Mean*	*SD*
Social utility value (composite)	133	5.56	0.66
Social influences (composite)*	134	4.46	1.32
Late-career (10+ years)			
Ability	114	5.52	1.03
Intrinsic career value	114	5.75	0.71
Fallback career	113	2.45	1.73
Content interest	113	5.42	1.12
Personal utility value (composite)	113	3.87	1.61
Social utility value (composite)	114	5.57	0.68
Social influences (composite)*	114	4.55	1.28

* Removed from analysis for low reliability

Table 6. *Descriptive Statistics By Academic Teaching Level*

Academic Teaching Level	*N*	*Mean*	*SD*
ECE			
Ability	328	5.55	0.86
Intrinsic career value	326	5.80	0.59
Fallback career	326	2.36	1.67
Content interest	327	5.26	1.17
Personal utility value (composite)	327	3.96	1.53
Social utility value (composite)	328	5.63	0.61
Social influences (composite)*	329	4.85	1.27
Middle			
Ability	87	5.36	1.03
Intrinsic career value	86	5.67	0.74
Fallback career	87	2.68	1.70
Content interest	87	5.53	0.85
Personal utility value (composite)	87	4.20	1.42
Social utility value (composite)	87	5.60	0.64
Social influences (composite)*	87	4.87	1.21
Secondary			
Ability	142	5.49	0.86
Intrinsic career value	141	5.72	0.60
Fallback career	139	2.76	1.80
Content interest	142	5.73	0.75
Personal utility value (composite)	142	3.95	1.43
Social utility value (composite)	142	5.44	0.72
Social influences (composite)*	142	4.97	1.14

* Removed from analysis for low reliability

ANOVA and Bonferroni simple effects models. Prior to conducting the ANOVA models, we screened the data to ascertain if the assumptions inherent in ordinary-least squares (OLS) analyses, such as ANOVA, were met. Skewness and kurtosis values for ability beliefs, intrinsic career value, interest in content, and social utility value composite variable were relatively high, with absolute values > 2, indicating non-normality in the sample. As a check, we conducted a Kruskal–Wallis nonparametric analysis that does not make assumptions about sample normality or homogeneity of variance-covariance matrices (Nussbaum, 2014). We found very similar results between the Kruskal-Wallis tests and the univariate ANOVAs; therefore, we proceeded with using the ANOVA output to present results. Table 7 shows the results of those univariate ANOVA models, and Table 8 shows simple effects post-hoc analyses.

Significant univariate ANOVA models and post-hoc Bonferroni simple-effects analyses were found for personal utility value, social utility value, intrinsic career value, fallback career, and interest in content. For *personal utility value* there was a main effect of career point $F(3, 541) = 7.19$, $MSE = 15.42$, $p < .001$, $\eta_p^2 = 0.04$. Post-hoc Bonferroni simple-effects analyses showed PSTs had significantly higher personal utility value ($M = 4.33$, $SD = 1.34$) than early ($M = 3.63$, $SD = 1.50$) and mid-career ISTs ($M = 3.87$, $SD = 1.50$). Middle grades PSTs ($M = 4.65$, $SD = 1.30$) scored significantly higher than middle grades mid-career ISTs ($M = 3.60$, $SD = 1.32$). Secondary PSTs scored significantly higher ($M = 4.11$, $SD = 1.29$) than secondary early-career ISTs ($M = 3.06$, $SD = 1.50$).

For *social utility value*, there was a main effect for career point $F(3,542) = 2.78$, $MSE = 1.15$, $p = 0.04$, $\eta_p^2 = 0.02$ and academic teaching level $F(2, 542) = 4.34$, $MSE = 1.79$, $p = 0.01$, $\eta_p^2 = 0.02$. Post-hoc Bonferroni simple-effects analyses showed PSTs ($M = 5.65$, $SD = .054$) significantly higher than early-career teachers ISTs ($M = 5.48$, $SD = 0.77$), which approached significance at $p = .05$. ECE teachers scored significantly higher on SUV ($M = 5.63$, $SD = 0.61$) than secondary teachers ($M = 5.44$, $SD = 0.72$).

For *intrinsic career value*, there was a main effect for certification level $F(2,538) = 3.68$, $MSE = 1.41$, $p = 0.03$, $\eta_p^2 = 0.01$. Post-hoc Bonferroni simple-effects analyses indicated that ECE teachers ($M = 5.80$, $SD = 0.59$) scored significantly higher than middle grades teachers ($M = 5.67$, $SD = 0.74$).

For *fallback career*, there was a main effect for career point $F(3,537) = 3.52$, $MSE = 10.09$, $p = 0.02$, $\eta_p^2 = 0.02$. Post-hoc Bonferroni simple-effects analyses showed that PSTs ($M = 2.85$, $SD = 1.75$) scored significantly higher than mid-career ISTs ($M = 2.17$, $SD = 1.56$).

Lastly, *interest in content* showed a main effects for career point $F(3,541) = 3.22$, $MSE = 3.32$, $p = 0.02$, $\eta_p^2 = 0.02$ and academic teaching level $F(2, 541) = 7.82$, $MSE = 8.05$, $p < .001$, $\eta_p^2 = 0.03$, and also an interaction for career point by academic teaching level $F(6, 541) = 2.11$, $MSE = 2.17$, $p = 0.05$, $\eta_p^2 = 0.02$. Post-hoc Bonferroni simple-effects analyses showed that PSTs ($M = 5.66$, $SD = 0.71$) scored significantly higher than early-career ISTs ($M = 5.27$, $SD = 1.14$) approaching significance at $p = .05$. Secondary education teachers as a whole ($M = 5.73$, $SD = 0.75$) scored significantly higher than middle grades ($M = 5.53$, $SD = .85$) and ECE ($M = 5.26$, $SD = 1.17$) teachers, while ECE PSTs ($M = 5.54$, $SD = 0.80$) scored significantly higher than ECE mid-career ISTs ($M = 4.92$, $SD = 1.37$. ECE late-career ISTs ($M = 5.35$, $SD = 1.18$) scored significantly higher than ECE mid-career ISTs ($M = 4.92$, $SD = 1.37$).

Table 7. *Univariate ANOVA Model Statistics By Group*

*Year group, academic teaching level, group*academic teaching level*	*F*	*df*	*MSE*	*p*	η_p^2
Personal utility value					
career point	7.19	3,541	15.42	< .001	0.04
Social utility value					
career point	2.78	3,542	1.15	0.04	0.02
academic teaching year	4.34	2, 542	1.79	0.01	0.02
Intrinsic career value					
academic teaching year	3.68	2,538	1.41	0.03	0.01
Fallback career					
career point	3.52	3,537	10.09	0.02	0.02
Interest in content					
career point	3.22	3,541	3.32	0.02	0.02
academic teaching year	7.82	2, 541	8.05	< .001	0.03
career point*certification level	2.11	6, 541	2.17	0.05	0.02

Table 8. *Simple Effects Pairwise Comparisons*

*Year group, certification level, group*certification level*	*Pairwise comparisons*
Personal utility value	• PSTs > early/mid-career ISTs • middle grades PSTs > middle grades mid-career ISTs • Secondary PSTs > Secondary early-career ISTs
Social utility value	• PSTs > early-career ISTs* • ECE > Secondary
Intrinsic career value	• ECE > middle
Fallback career	• PSTs > mid-career ISTs
Interest in content	• PSTs > early-career ISTs** • Secondary > middle and ECE • ECE PSTs > ECE mid-career ISTs • ECE late-career ISTs > ECE mid-career ISTs

* *Denotes p = .051*
** *Denotes p = 0.78*

Discussion

Using Richardson and Watt's (2006) 13-item short form FIT-Choice measure, we found significant differences for five separate univariate models that include: (1) intrinsic career value, (2) fallback career, (3) personal utility value, (4) social utility value, and (5) interest in content. We will discuss explanations and implications for each of these models in the sections that follow.

Personal utility value. We found differences between: (a) PSTs and early/mid-career ISTs, (b) middle grades PSTs and mid-career ISTs, and (c) secondary education PSTs and early-career ISTs. These findings suggest that the personal benefits associated with teaching could, in fact, change once a PST finishes their teaching certification and changes context from being a learner to an instructor. As Darling-Hammond (2006) explains, ISTs' workdays generally consist of

preparing for lessons and lesson planning (often related to standardized testing), individual tutoring, paperwork (e.g., individual education plans [IEPs]), and administrative duties. Many of these activities take hours to complete either before or after school and on the weekends, which leaves less personal time. The shock of realizing that a teaching career *does not* in fact increase one's personal benefits may be demotivating over the course of a teaching career, which is apparent for mid-career middle grades ISTs and secondary early-career ISTs.

A more specific example points to the possibility that the job security ISTs believed they had when pursuing their teacher certification was not as secure as they had initially thought upon entering the field. The United States' valuing of capitalism has popularized charter schools and other types of privatized education (Lipman, 2004). Thus, instead of education acting as a means of educating and developing a community's citizenry, it acts as a vehicle for profit, accountability, and outcomes on standardized tests. Within this system, job security, such as tenure and union protections, are less common (Solomon & Gifford, 1999). Thus, if a teacher is not producing in the terms laid out by the state or the charter organization, he or she might be at risk for losing their job. This type of pressure can be damaging to a teacher's sense of motivation. It is possible that PSTs in our sample are not as aware of the political landscape affecting teachers. It is essential that PSTs understand the state of their field and that teacher education programs are teaching the sociological, anthropological, and economic foundation of the national and local school districts. This is especially important for the sample in our study which comes from an urban center that has been ravaged by neoliberal educational policies, for example, implementing a "diverse provider model" (Conner & Monahan, 2015) that encourages for-profit, non-profit, and university takeover of schools within the district (Bulkley, 2007).

Social utility value. For social utility value, we discovered significant differences by career point and academic teaching level. The simple effects analysis showed significant differences within career point between PSTs and early-career ISTs and between ECE and secondary education teachers with PSTs and ECE teachers rating social utility value higher than ISTs and secondary teachers.

Previous research has found that social utility value is a common and strong motivator for teachers (see Brookhart & Freeman, 1992). This idealism is likely pervasive in PSTs who have not yet been fully inducted into classroom teaching, as evidenced by PSTs high rating of social utility value. The early-career ISTs' significantly lower social utility value fit our hypothesis that early-career teachers will experience a decline in motivation. This decline is especially important to note given the urban context in which these teachers were trained and taught and their demographics; our sample was mostly female and White. Two common and related tropes that plague urban education are deficit thinking and the white savior (usually female in education). The White female savior is frequent in mass media portrayals of urban school success and many white teachers teaching in urban schools use these media portrayals as inspiration for their career choice (Brown, 2013). Deficit thinking is pervasive in urban education and detrimental to students' short and long-term success (Irizarry, 2009; Cammarato, 2011). Prior research has found that deficit thinking often stems from social utility value (Authors, 2018). Armed with the savior and deficit mentalities, many PSTs enter urban classrooms with intentions of "saving" their students or the schools. By the time they become early-career ISTs, they have encountered the often demanding reality of urban schools and their social utility value is lower.

It is important to note however that the mean values for social utility value are relatively high for all groups in this model (between 5.64 and 5.48). Although early-career ISTs had the lowest

social utility value, it was still relatively high. According to Klassen and Chiu (2010), during this time it is possible to observe steady rises in in teaching self-efficacy, a better grasp on classroom management, and increased self-efficacy around engaging one's students (Klassen & Chiu, 2010). Teachers attrition rates also decline around this career stage (Ingersoll, 2012, Ingersoll, Merrill, & May, 2014).

The second finding shows a difference between ECE and secondary teachers on social utility value. Numerous articles exist in the teacher education and teacher motivation literature that show that ECE teachers are more motivated to teach because of a social utility value/altruism/the desire to work with students versus secondary school teachers who desire to teach within a specific content area (see Book & Freeman, 1986; Brookhart & Freeman, 1992; Heinz, 2015; Lortie, 1975; Moran, Kilpatrick, Abbott, Dallat, & McClune, 2001). This finding adds further support to the literature describing the differences in values between ECE and secondary school teachers.

Intrinsic career value. As shown in the results section, ECE teachers had higher intrinsic career value than middle grades teachers. On face value, there do not appear to be any clear reasons why ECE teachers would enjoy the act of teaching more than middle grades teachers. However, the FIT-Choice short form uses only one item to measure intrinsic career value: "I like teaching." We hypothesize that teachers in these different groups are perhaps interpreting this item differently and possibly thinking about different aspects of teaching that may or may not be enjoyable or valuable to them. This finding has important theoretical implications for the field of teacher motivation. Prior research has found that intrinsic career value is a good predictor of persistence in the classroom (Authors, 2017); therefore, it is imperative to better understand what aspects of teaching form teachers' intrinsic career value and if those aspects differ by career-stage and type of certification. This is an area for future research.

Interest in content. Secondary teachers were more motivated by interest in their content than middle grades and ECE teachers. This is unsurprising, given that in their pre-service training, secondary teachers must choose a content-area in which to specialize and obtain their certification (e.g., mathematics, science, language arts, etc.). In fact, the pre-service teachers in this sample were required to double major in both education and their content-area. ECE teachers are generalists and do not have to specialize in a subject-area. Middle grades teachers in this sample receive a generalist certification for grades 4–6 and then choose a content-area specialization for grades 7–8. Therefore, they have some of the content focus of the secondary teachers but not to the same extent. We interpreted these results with present state certification requirements in mind. Certification requirements do vary by state and thus may impact how motivation differs by grade-level taught.

Implications

The findings from this study have important implications for practitioners and policy makers. The current study as well as others (e.g., Ingersoll, 2001, 2012; Ingersoll and Smith, 2003) found that the first five years in the field are the most crucial and also the most sensitive for teachers' motivation. It is during this stage that teachers suffer the most from shock and burnout (Kim & Cho, 2014) and often leave teaching. However, this study also found that mid-career ISTs had lower motivation in some areas than other groups. This career stage has received less attention in the literature leading us to believe that this group of teachers is often overlooked. To combat these negative impacts on teachers' motivation, interventions should be put in place to offer support to

these new and mid-career teachers. This could be addressed through multiple avenues: (1) pre-service teacher educators, (2) professional development educators, (3) educational policy makers.

First, pre-service teacher educators can be more aware of the reality shock often experienced by new teachers in urban schools and can better prepare their students by talking to them about the problems of deficit thinking and a savior mentality, and also providing them with more pre-service field experiences in urban classrooms so that they are better prepared for the exact context in which they will be teaching. Second, professional development is usually required of all teachers with most early-career teachers undergoing some type of induction process. Improving this process to include supports for new teachers would be greatly beneficial based on the findings of the current study. Professional development is also an excellent place to offer support to mid-career teachers who may be suffering from a decline in motivation. Third, educational policy makers can support policies such as improved induction procedures for new teachers, teacher coaches external to the school, as well as teacher mentors within the school. Prior research has shown that policies such as these help with teacher retention (Smith & Ingersoll, 2004), reduce feelings of isolation, and increase self-esteem, problem solving capabilities, and job satisfaction (Hobson, Ashby, Malderez, & Tomlinson, 2009).

Limitations

The current paper is suggestive of motivational changes over the course of a teacher's career. This paper focuses on differences in values, ability beliefs, and social influences for groups of PSTs and ISTs at different points in their careers. Readers should recognize that certain conclusions of this study are provisional and should be approached with a degree of caution. First, the data collected in this study is cross-sectional. Conducting a longitudinal study might be warranted to describe individuals' potential differences and changes at various time points along their teaching careers (Payne & Payne, 2004). Knowing participants' differences and changes longitudinally might help isolate why motivation potentially declines at a certain point in a teacher's career.

Furthermore, it is possible that the year when PSTs and ISTs entered their teacher preparation program could influence the responses of the participants. Teacher preparation programs have changed since late-career ISTs first entered their teacher preparation programs. An emphasis on data-driven decision making and other forms of assessment have become more prevalent in the last decade (Mandinach, 2012); thus, survey responses indicating levels of motivation at specific points in time could differ between current PSTs and past PSTs.

Conclusions and Future Research

Research with the FIT-Choice model is only beginning. Future investigations should include longitudinal studies over the course of a teacher's entire career, particularly utilizing the FIT-Choice framework. A longitudinal study following a large group of pre-service teachers through their teacher training and the length of their career would be a beneficial addition to the current body of literature using the FIT-Choice model and scale.

In addition to longitudinal studies, more research is needed into social utility value, especially as PSTs and ISTs experience it in urban schools. Are they valuing social utility from a deficit or savior mentality and is that actually more harmful than helpful, both to the teachers' long term persistence in the field and to their students and schools? As research in teacher education becomes more robust, the FIT-Choice framework might benefit from adding greater nuance to their constructs that could give the model a more holistic view of a teacher's motivation and its impact.

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