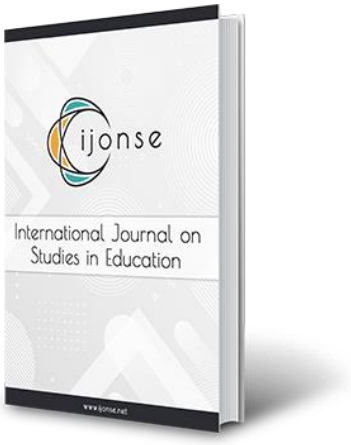

www.ijonse.net

Motivational Typologies among Teachers and Differences Within

Margareta M. Thomson
North Carolina State University, U.S.A.

Zarifa Zakaria
North Carolina State University, U.S.A.

Jean-Louis Berger
University of Fribourg, Switzerland

To cite this article:

Thomson, M. M., Zakaria, Z., & Berger, J. (2023). Motivational typologies among teachers and differences within. *International Journal on Studies in Education (IJonSE)*, *5*(2), 177-192. https://doi.org/10.46328/ijonse.137

International Journal on Studies in Education

2023, Vol. 5, No. 2, 177-192 https://doi.org/10.46328/ijonse.137

Motivational Typologies among Teachers and Differences Within

Margareta M. Thomson, Zarifa Zakaria, Jean-Louis Berger

Article Info

Article History

Received:

12 December 2022

Accepted:

13 March 2023

Keywords

Typologies

Teachers

Motivations

Beliefs

Abstract

The current study investigated teaching typologies, more specifically, motivational profiles and differences among the identified typologies based on their instructional beliefs and teaching efficacy beliefs. Data was collected using surveys from preservice teachers in the United States (*N*=327) enrolled in a traditional teacher training program at a major university in the Southeast. Study results identified distinct teacher typologies based on their teaching motivations, and differences with respect to their instructional and efficacy beliefs. Study findings can help researchers and teacher education programs understand the complex interplay between teaching motivations, beliefs and cultural nuances related to these concepts. Study implications are further discussed in relation with findings.

Introduction

National and international educational reports show that thousands of teachers leave the profession, most of them with fewer than five years of experience (National Commission on Teaching and America's Future, 2007; OECD, 2009; Thomson & Palermo, 2014, 2018). Many teachers leave the profession because teaching is not what they believed it would be, or they are not a good fit for the profession (Guarino, Santibanez, & Daley, 2006; Thomson & McIntyre, 2013). As they learn what the work truly is, novice teachers recalibrate their views about teaching and citing working conditions, self-efficacy for teaching, administrative support, and lack of influence over school policy (Cochran-Smith & Zeichner, 2005; Thomson et al., 2019, 2020). These factors point to prospective teachers having goals and a belief system about teaching that do not often match the realities of classrooms and schools. It is essential therefore to understand *prospective teachers' initial motives* for teaching, and how these relate to their *beliefs* (i.e., *views about teaching, instructional* and *efficacy beliefs),* within a specific cultural context.

The purpose of the current study was to identify teacher typologies based on their motivational patterns in a sample from the United States. Further, we explored how the identified typologies are different in terms of demographic characteristics and their personal beliefs. Our study is a response to the scarcity of such research in the teaching education field. Hence, with the current study's aim, we respond to the need for more research in this area, and also to the need to *explore teaching motivations in connection with other variables, such as teaching efficacy and instructional beliefs.*

The research questions addressed in the current study were:

1) What typologies can be identified based on preservice teachers' motivations for teaching?

2) What are the differences between the identified typologies with respect to their instructional and teaching efficacy beliefs?
3) Do motivational profiles predict teacher's instructional beliefs and their teaching efficacy?

Theoretical Underpinnings

Teaching Motivations

In recent years a great deal of research has been focused on teacher motivation and teaching as a career choice as the profession has been impacted by increasing rates of attrition and ever-changing demands being placed on teachers. Some of this research examines motivational factors and individuals' choices about teaching; entry motives and values of preservice teachers; persistence in the teaching profession, and profiles of those who choose teaching as a career (Berger & D'Ascoli, 2012; Berger & Girardet, 2021; Watt & Richardson, 2008, 2011). Researchers commonly classify teaching motivators into intrinsic and extrinsic reasons, described as key reasons and values to teach, along with individuals' perceptions of and commitment to the teaching career (Konig & Rothland, 2012; Pop & Turner, 2009; Richardson & Watt, 2005; Smethem, 2007; Thomson & Berger, 2021). Research focused on expectancy-value approaches have found that the types of values and expectations of preservice teachers are critical for their teaching choices, their goal persistence, and their effort (Fokkens-Bruinsma & Canrinus, 2012; Parkes & Jones, 2012; Watt & Richardson, 2008).

Other studies conducted with preservice teachers from the United States, Australia, Germany, Turkey, and Estonia have reported similar conclusions, highlighting the importance of personal and social values across cultural contexts (Kilinc, Watt, & Richardson, 2012; Taimalu, Luik, Voltri, & Kalk, 2011; Watt & Richardson, 2008, 2011; Watt et al., 2012). Furthermore, initial career satisfaction in addition to self-perceived teaching ability has been linked to altruistic motivations and intrinsic values in studies from various countries (Pop & Turner, 2009; Watt & Richardson, 2007, 2008, 2011; Thomson et al., 2012). When examining the motivational causes of individuals leaving the teaching profession, Müller, Alliata, and Benninghoff (2009) documented the gap between teachers' professional entry motives at and their exit motives, noting differences found between the two points in time such as job characteristics, working conditions, and professional image. Specifically, teachers were found to enter the profession expecting a consistent job routine and autonomy in how they approached their pedagogy, and as a result had a strong sense of identification with the profession. At the time they exited the profession, however, teachers were frustrated by the inconsistency introduced by reform initiatives as well as the lack of autonomy and flexibility they found in the classroom, and as a result over time had dis-identified with the profession (Smith & Southerland, 2007).

Studies exploring teaching motivation have found that the types of values and expectations of preservice teachers are crucial for their persistence in pursuing teaching goals, and the effort invested in accomplishing these professional goals (Fokkens-Bruinsma & Canrinus, 2012; Watt & Richardson, 2008). Parkes and Jones (2012) explored the motivations to teach music of undergraduate preservice teachers in the United States, finding a strong correlation between utility value and participants' motivation to teach. The authors determined that individuals who chose to enter the teaching profession generally did so because of a belief that society would benefit from

their work (Parkes & Jones, 2012). Therefore, socioeconomic status, cultural values and cultural contexts contribute greatly to shaping one's career expectations and motivations (Thomson et al., 2012).

Instructional and Efficacy Beliefs

Teaching beliefs (i.e., instructional beliefs, beliefs about career and teaching efficacy beliefs) are extremely important in influencing someone's decisions to become a teacher (Thomson et al., 2014). Research shows that teachers' and prospective teachers' schooling experiences are crucial in developing their perceptions about effective teaching and their preferred instructional approaches. Most preservice teachers reported that they will use a teaching approach like what they experienced as K-12 students and will teach the way their former teachers have taught (Thomson et al., 2019).

Additional studies conducted in Australia (Watt & Richardson, 2007, 2008), UK (Kyriacou, & Coulthard, 2000; Smethen, 2007) and US (Thomson et al., 2012, 2013, 2019) show that individuals' teaching motivations are strongly connected with their teaching beliefs and their expectations of the profession. Research exploring the relationship between teacher expectancies and ability beliefs and a range of outcome variables, find these constructs to be strongly connected with motives for entering and persisting in the teaching profession, as well as engaging in professional development and implementing professional development-related initiatives. For example, Ware and Kitsantas (2010) examined the beliefs of 26,000 teachers in the United States and found that teachers' beliefs, including teachers' efficacy for classroom management, significantly predicted their commitment to teaching.

There also exists a growing body of literature examining teacher efficacy, or teachers' beliefs about their abilities to help students learn. Research on teacher efficacy has shown that teachers make judgments about the demands of teaching tasks as well as their abilities to meet those demands (Tschannen-Moran & Woolfolk Hoy, 2001; Pajares, 1996). Research investigating teaching beliefs related to expectation for compensation and the value placed on salary as a function of their career choice has also been examined. Preservice teachers in previous studies revealed one of two beliefs: they were motivated to teach based on the belief that they would be adequately compensated for their work, or they were undeterred by the reportedly low wages associated with the profession, believing that other positive factors eclipsed the payment (Watt & Richardson, 2011).

Methods

Sample

In the current study, we used quantitative data (survey) from prospective teachers (N=327) enrolled a teacher education program at a major university in the United States (US). Table 1 presents a summary of participants' demographics. Most participants were females (n=241; 73.7%), and 86 (26.3%) were male participants. Also, 301(92%) participants reported their age between 17- 26 years old. Participants were enrolled in a teacher education program from several different areas. From the Elementary Education undergraduate program, we had 120 (36.7%) participants, and from the STEM (Science Technology Engineering and Mathematics) undergraduate

education program we had 44 (13.5%). Further, we had 69 (21.1%) participants from the graduate Master of Arts Teaching program (MAT).

Table 1. Participants' Demographics (N = 327)

Demographics	Frequency (*n*)	Percentages (%)
Age group		
17-26	301	92
27-36	19	5.7
37-46	6	1.8
17-26	301	92
27-36	19	5.7
Gender		
Female	241	73.7
Male	86	26.3
Program area		
Elementary	120	36.7
STEM	44	13.5
Social studies	6	1.8
MAT (elementary)	29	8.9
MAT (middle and secondary)	40	12.2
Other education programs	87	26.6
Intention for teaching		
Yes	295	90.2
Undecided	25	7.6

Participants enrolled in an undergraduate education program follow a four-year coursework, which is the traditional route in the US for becoming a teacher. Participants from the MAT program follow a two-year master's program focusing on teacher preparation in various areas (e.g., mathematics, science, elementary education). All study participants mentioned in their surveys their intention for teaching and 295 (90.2%) participants said that they intend to teach immediately after graduation.

Measures

In the current study, we used three measures to examine variables related to prospective teachers' motivations for teaching, their instructional beliefs, and their teaching efficacy beliefs. Table 2 presents a summary of measures and Appendix A presents the instruments with their subscales.

Table 2. Study Measures and Reliability

Survey	Subscales	Reliability scores
FIT-Choice Scale (Watt, & Richardson, 2007) (62 items, *alpha*=.91)	- *Motivation* - *Antecedent socialization* - *Perceptions of teaching*	*alpha=.90* *alpha=.79* *alpha=.93*
Teaching and Learning International Survey (TALIS, OECD, 2009) (8, items, *alpha* =.95)	-*Constructivist beliefs* -*Traditional beliefs*	*alpha=.62* *alpha=.63*
Teacher's Sense of Efficacy Scale (TSE; Tschannen-Moran, & Woolfolk Hoy, 2001) (12 items, *alpha* = .91)	-*Student Engagement* -*Instructional Strategies* -*Classroom Management*	*alpha=.81* *alpha=.79* *alpha=.84*

FIT-Choice Scale (Watt, & Richardson, 2007). To examine prospective teachers' *motivations for teaching* and their *perceptions of teaching* we used an adapted version of the *FIT-choice scale* (validated in Berger et al., 2012), a 62-item inventory on a 7-point Likert scale asking participants to rate their most influential motivations for teaching and their agreement with statements about the teaching profession. The adapted version of the *FIT-choice scale* used in the current has a reliability score Chronbach's alpha for the instrument of. 91. The reported values for the subscales are .90 for the *Motivation to teach* dimension and .93 for the *Perceptions of teaching* dimension.

Teaching and Learning International Survey (TALIS, OECD, 2009). To examine prospective teachers' instructional beliefs, we used two scales from the Teaching and Learning International Survey (TALIS, OECD, 2009), an 8-item inventory on a 7-point Likert scale asking participants to rate their agreement with pedagogical statements provided in the survey. In the current study, a reliability score Chronbach's alpha for the instrument was found as .95. The two subscales assess Constructivist beliefs (Chronbach's alpha was .62) about teaching and learning versus Traditional beliefs (Chronbach's alpha was .63) about teaching and learning.

Teacher's Sense of Efficacy Scale (TSE, Tschannen-Moran, & Woolfolk Hoy, 2001). To examine preservice teachers' efficacy beliefs, we use the TSE short version (12 items, on a 7-point Likert scale, Chronbach's alpha was .95). In our analysis we used the three subscales, namely *Student Engagement* (Chronbach's alpha was .81), *Instructional Strategies* (Chronbach's alpha was .79), and *Classroom Management* (Chronbach's alpha was .84).

Results

Identified Teaching Typologies

To answer our first research question "What typologies can be identified based on preservice teachers' motivations for teaching?" a hierarchical cluster analysis on the FIT-Choice variables was performed with the sample of 327 preservice teachers. Ward's method (Mooi & Sarstedt, 2011) of minimum variance procedure using squared-Euclidean distances was used for the analysis. First, we used hierarchical agglomerative clustering. We identified four clusters by exploring large changes in fusion coefficients and examining the dendrogram.

A cluster solution is considered more robust and stable when it is repeated under different algorithms. Thus, we also used k-means cluster analysis to validate the hierarchical clustering result (Mooi & Sarstedt, 2011; Chittum & Jones, 2017). K-means allow for multiple iterations which help to test cluster stability. After identifying K-means cluster membership of each sample, cluster reliability was identified using Cohen's K. The agreement between hierarchical clustering and K-means clustering was .674.

For further validating the cluster solution, we used principal component variable grouping (PCVG), an unsupervised, intuitive method that assigns a large number of variables (dimensions) to a smaller number of dimensions (usually one/two) that can be more readily visualized and understood (Ivosev et al., 2008). The visual output of PCVG revealed four distinct clusters (i.e., typologies) among study participants (see Figure 1) which confirms the four cluster solutions obtained via hierarchical cluster analysis.

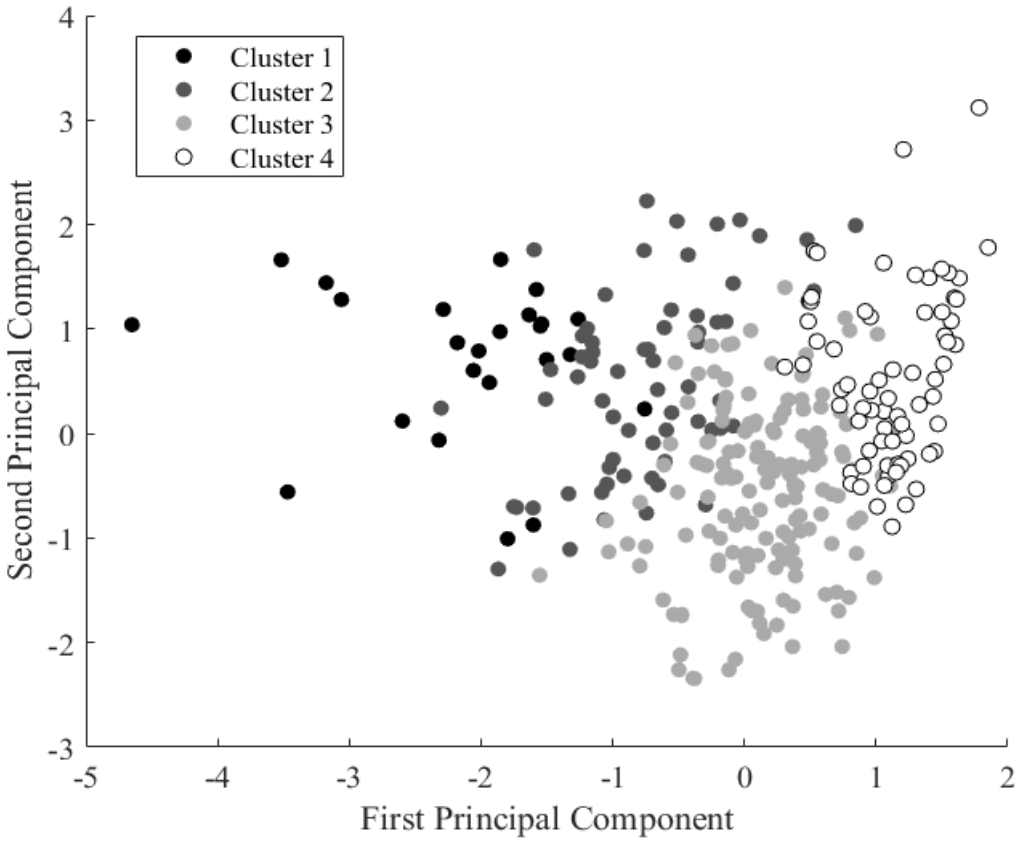

Figure 1. FIT-choice Variables using Principal Component Variable Grouping with respect to Participants' Cluster Membership

We identified four teaching typologies and further explored the identified four clusters/typologies of individuals (*n*'s of 24, 64, 164, and 71). Results show that each cluster demonstrates a distinct set of motivational features, thus displaying distinct motivational profiles. The identified typologies in the current study were labeled as: cluster 1 "Low aptitude and intrinsic value", cluster 2 "High personal utility and perception", cluster 3 "High social utility", cluster 4 "High aptitude and intrinsic value". Figure 2 shows a visual representation of four clusters across all the variables.

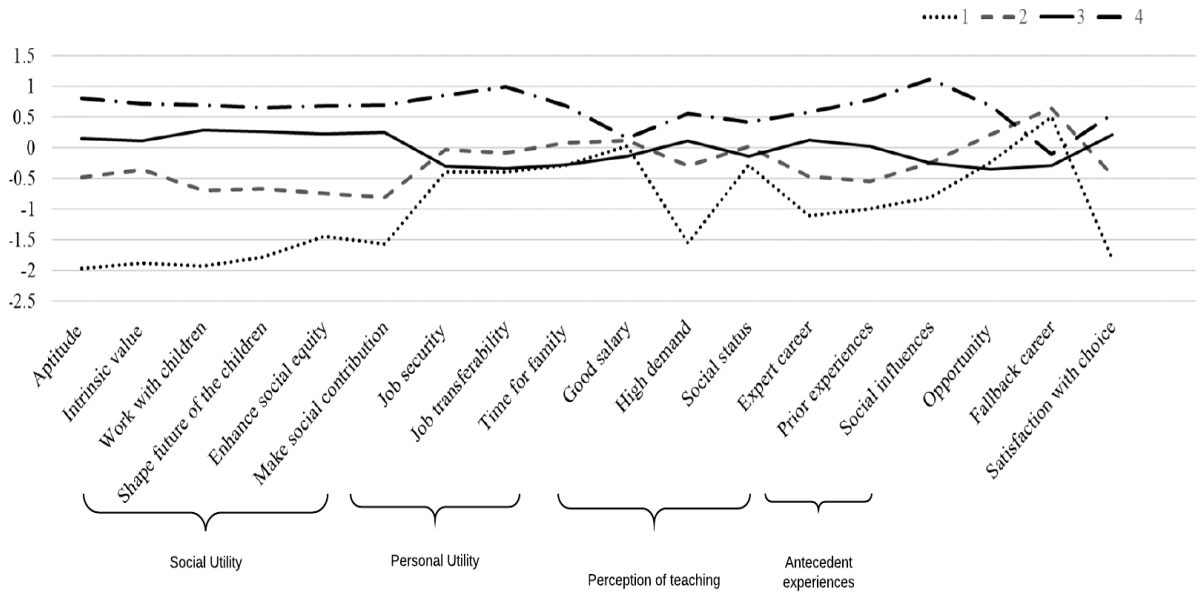

Figure 2. The Four Teaching Typologies identified (N=327). Clustering Profiles and Motivational Patterns from FIT-choice Factors

Cluster 1: High personal utility and low social utility. In cluster 1 (*n*=24), participants' profiles indicated that preservice teachers in this group obtained the lowest scores on intrinsic value and social utility value, as well as the lowest aptitude scores compared to all other participants from the remaining clusters. Overall, participants from this cluster obtained a high score for personal utility value, such as expectation of job security, transferability, and availability of spending time with family. Additionally, participants in this cluster had the lowest scores regarding their satisfaction with their decision to choose teaching as a career. Moreover, cluster 1 participants indicated in their survey responses that they consider teaching a fallback career and/or decided to become teachers because this opportunity was presented to them.

Cluster 2: High personal utility and perception of teaching career. Cluster 2 participants (*n*=64) indicated in their survey responses that they highly value the personal utility value of a teaching career. However, unlike cluster 1, this cluster expressed a higher perception of teaching as a career choice. Participants' scores regarding their perception of the teaching career, i.e., good salary, highly demanding, needing expertise and having a social status, were relatively higher in this cluster, compared to participants from the other clusters. However, like cluster 1, participants in this cluster also considered teaching as a fallback career plan and their responses indicated that they are less satisfied with the choice of teaching as a career.

Cluster 3: Low personal utility and high social utility. Cluster 3 had the highest number of participants (*n*=164*).* Compared to the other three clusters, cluster 3 had the highest social utility values, such as shaping the future of the children, and making social contributions. Participants from cluster 3 however, obtained a low score regarding the personal utility value of teaching. Noteworthy, this cluster had the lowest score among all clusters when considering teaching as a career by opportunity or as a fallback career. In contrast to cluster 1 and 2, participants from cluster 3 were more satisfied with their decisions to become teachers.

Cluster 4: High personal utility and high social unity. Overall motivation is highest in cluster 4 (n=71); participants showed high personal utility values as well as high social unity among all four clusters. Also, cluster 4 participants did not consider teaching as a fallback career, showing high satisfaction with their decisions to pursue teaching as a career. Table 3 presents the cluster centers of the four-cluster solution for all study participants (N=327).

Table 3. Cluster Profiles Based on Motivation (N=327)

	Cluster 1 (n=24)		Cluster 2 (n=66)		Cluster 3 (n=164)		Cluster 4 (n=71)			
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	η_p^2
Motivation										
Aptitude	-1.98	0.98	-0.48	0.88	0.14	0.69	0.80	0.49	100.8***	0.485
Intrinsic value	-1.89	1.00	-0.36	0.90	0.12	0.76	0.72	0.57	74.3***	0.41
Social utility										
Work with children	-1.94	1.27	-0.70	0.90	0.28	0.59	0.70	0.25	120.2***	0.529
Shape future of children	-1.78	1.38	-0.67	1.00	0.26	0.60	0.65	0.32	89.3	0.455
Enhance social equity	-1.45	1.06	-0.75	0.91	0.22	0.79	0.68	0.45	70.6***	0.398
Make social contribution	-1.57	1.17	-0.81	0.98	0.25	0.69	0.69	0.32	87.9***	0.451
Personal utility										
Job security	-0.40	0.97	-0.03	0.89	-0.30	0.92	0.85	0.79	29.6***	0.217
Job transferability	-0.39	0.65	-0.08	0.88	-0.34	0.94	0.99	0.64	43.0***	0.287
Time for family	-0.28	0.93	0.08	0.96	-0.28	0.95	0.68	0.81	18.8***	0.149
Perception of teaching career										
Good salary	0.03	0.88	0.11	1.08	-0.14	0.91	0.15	1.03	1.9	0.018
High demand	-1.56	1.49	-0.29	0.81	0.11	0.88	0.55	0.49	39.7***	0.271
Social status	-0.28	0.80	0.01	1.02	-0.14	0.95	0.42	1.06	6.1***	0.054
Expert career	-1.10	0.98	-0.47	0.98	0.12	0.90	0.58	0.67	29.9***	0.219
Antecedent experiences										
Prior Experiences	-0.99	1.10	-0.55	0.95	0.02	0.92	0.78	0.44	38.78	0.266
Social influences	-0.80	0.55	-0.24	0.84	-0.26	0.89	1.12	0.54	62.3***	0.368
Opportunity	-0.23	0.64	0.21	0.99	-0.35	0.82	0.68	1.11	23.1***	0.178
Fallback career	0.51	0.96	0.65	1.22	-0.29	0.64	-0.11	1.15	18.7***	0.149
Satisfaction With choice	-1.81	1.12	-0.44	0.98	0.21	0.77	0.55	0.50	62.6***	0.369

Note: * p<.05; ** p<.005; *** p<.001

Differences in Teaching Beliefs among Typologies

We used ANOVA in order to answer our second research question "What are the differences between the identified typologies with respect to their instructional and teaching efficacy beliefs?" We tested the differences between the four identified clusters (see Table 5) with respect to participants' instructional beliefs (TALIS) and self-efficacy beliefs (TSE). With respect to participants' instructional beliefs (TALIS), ANOVA results revealed a significant difference between the means of the four clusters on both TALIS subscales, the *constructivist beliefs*, F (3, 311) = 9.81, p = .000, η_p^2 = .085, and *traditional beliefs*, F (3,311) = 8.31, p = .000, η_p^2 = .073. Cluster 4 showed comparatively higher constructivist beliefs (M = .39) and lower traditional beliefs (M = .27), whereas cluster 1 showed higher scores in traditional beliefs (M = .34) and low scores on constructivist beliefs (M = -.86).

With respect to participants' self-efficacy beliefs (TSE), ANOVA results revealed a significant difference between the means of the four clusters on all three TSE subscales, namely *student engagement*, *instructional strategies*, and *classroom management*. ANOVA results suggests that there is a significant difference between the means of the four clusters on *student engagement*, F (3,311) = 18.88, p = .000, η_p^2 = .152, *instructional strategies*, F (3,311) = 10.15, p = .000, η_p^2 = .088 and *classroom management*, F (3,311) = 12.79, p = .000, η_p^2 = .109. However, only *student engagement* has a large effect size among all the subscales. Clusters' efficacy beliefs progress from low to high starting with cluster 1 to cluster 4 (see Table 4).

Table 4. Cluster Differences (N=327)

	Cluster 1		Cluster 2		Cluster 3		Cluster 4		F	η_p^2
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*		
Instructional beliefs (TALIS)										
Constructivist beliefs	-0.86	0.92	-0.13	0.92	0.00	1.01	0.39	0.89	9.819***	0.085
Traditional Beliefs	0.34	0.73	0.27	0.96	-0.26	0.92	0.27	1.14	8.31***	0.073
Teacher Efficacy (TSE)										
Classroom management	-0.66	0.84	-0.36	1.00	0.03	0.93	0.48	0.97	12.792***	0.109
Student engagement	-0.98	1.17	-0.29	0.83	0.01	0.93	0.55	0.90	18.878***	0.152
Instructional Strategies	-0.89	1.11	-0.16	0.98	0.03	0.92	0.36	0.99	10.15***	0.088

Note: * p<.05; ** p<.005; *** p<.001

Predicting Teacher Instructional Beliefs and Teaching Efficacy

We used multiple regression analysis to answer our third research question "Do motivational profiles predict teacher's instructional beliefs and their efficacy beliefs?" Results from a multiple regression analysis were statistically significant, Adj. R^2 = .127, F (5, 311) = 10.18, p < 0.001 with the predictors of cluster membership (see Table 5). These predictors selected in our analysis are namely, *teachers' self-efficacy in classroom management, student engagement, instructional strategies,* and *teachers' instructional beliefs* (constructive and direct instruction). All these variables accounted for 12.7% of the variation in the cluster profiles. Teachers' self-efficacy for students' engagement had the highest correlation with the cluster membership of teachers with a coefficient of β = 0.247, t (5,311) =3.08, p < .01. Instructional beliefs in constructive teaching had a coefficient of β = 0.170, t (5,311) = 3.16, and p <.001 and beliefs in traditional teaching had a coefficient of β = 0.183, t (5,311) =3.41, and p < .01. However, teachers' self-efficacy beliefs about classroom management (p = 0.628) and instructional strategies (p = 0.423), were not statistically significantly correlated with teachers' cluster membership.

Table 5. Summary of Multiple Regression Analysis for the Cluster Profiles

Variable	β	b	SE(b)	t
Constructivist beliefs	0.170	0.116	0.049	3.36**
Traditional beliefs	0.183	0.167	0.049	3.41***
Classroom management	-0.037	-0.034	0.070	-0.49
Student Engagement	0.247	0.224	0.073	3.08**
Instructional Strategy	0.059	0.053	0.067	0.80***
F			10.18***	
Adj. R^2			0.127	

Note: N = 311, SE = standard error

*p < .05, **p<.01, ***p<.001

Conclusion

The current study findings indicate the existence of four major teacher motivational profiles (i.e., typologies) showing a variation in teachers' motivations, instructional and efficacy beliefs, as well as teaching career intentions and values. Our findings also indicate that the identified teaching motivational typologies can significantly predict teachers' instructional and self-efficacy beliefs.

Differences in Typologies

The identified typologies from our study show that differences among the four clusters are due largely to participants' perceptions of teaching, more specifically the *personal utility value* of a teaching career. As we explored both the social and personal utility of teaching, we found that where teachers placed high values for social utility of teaching, they found teaching as a valuable service to the society. Vice versa, participants with

high scores in personal utility found the teaching career personally beneficial to them but placed less value on social utility for school teaching. Teacher typologies identified in cluster 1 and 2 indicated that participants from these clusters had high personal utility values and low social utility values for teaching, however, the difference lies in one holding a higher perception of the teaching career. Participants in both cluster 1 and 2 view teaching as a fallback career and obtained low scores in satisfaction with the choice of becoming a teacher. The other two typologies, respectively cluster 3 and 4, show that participants have high social utility values, but differ in their perceptions of personal utility value for teaching. With these typologies, it seems that teachers in cluster 3 and 4 do not consider teaching as a fallback career and are rather satisfied in their decision of choosing teaching as a career despite one cluster having low personal utility values. Although conventionally it might seem that people will prefer teaching as a job if they find high personal utility for teaching, the identified typologies indicate otherwise. Considering teaching as a primary career option and being satisfied in choosing teaching as a career seem to be depending on teachers' perception of social utility about the teaching profession.

Differences in Beliefs among Typologies

Participants in the identified typologies from our study significantly differed in their self-efficacy beliefs and their instructional beliefs. Participants from cluster 4 who obtained high scores in both social and personal utility value, also obtained comparatively high scores with respect to their constructivist beliefs. Teachers in this typology also have the highest scores in all constructs with respect to their efficacy beliefs. On the contrary, teachers in cluster 1 and 2 indicated higher personal utility and lower social utility values compared to cluster 3 and 4 participants. Also, participants from cluster 3 and 4 have comparatively high scores with respect to their traditional teaching beliefs and have lower scores in their self-efficacy beliefs. Depending on these findings, we can postulate that having a high social and personal utility perception for the teaching career may also impact on how teachers perform in the classroom.

Typologies and Other Variables

Finally, the typologies identified in our study indicated that teacher typologies can significantly predict teachers' instructional beliefs and teacher efficacy (e.g., specific constructs like student engagement and instructional strategies). Although not a high level of variation is explained by the prediction model, our study suggests that teacher typologies can lead to more effective exploration of how teachers' motivations impact or predict different variables of interest. Overall, the current study findings suggest that at some level, all participants had similar motivations for teaching, but placed different values for certain aspects of teaching, and expressed different beliefs about traditional versus constructivist instruction and teaching efficacy. Study findings can help teacher educators identify initial teaching motivations and identify teaching views as pre-service teachers progress through their teacher education program and develop professionally (Thomson et al., 2019, 2020, 2021). The US reforms emphasize the need to place more qualified and motivated teachers in the field to increase students' academic achievements; to do so, teachers need to be better prepared in their teaching education programs, helped to develop professionally and develop positive attitudes towards teaching (Alliance for Excellent Education, 2005; NCTQ, 2004; NCTA, 2007).

Limitations and Future Research

The main study limitations are due to participants' demographics and their academic background. The majority of study participants are female, and this is typical of a teacher education program in the US. Their views could be different from a population that is predominantly of male pre-service teachers. Also, study participants followed a traditional teacher preparation program in a public institution. It is possible that their teaching motivations, their teaching views and their pedagogical beliefs could be different that individuals following a non-traditional teacher training program (i.e., alternative programs to teaching licensure) or individuals enrolled in teacher training programs from private institutions.

Future research could address these limitations by examining the motivations, teaching views and pedagogical beliefs of participants with various backgrounds and following various teacher education routes to licensure (i.e., from private and public institutions, traditional and non-traditional teacher training programs). Future studies could build on our study findings by using longitudinal mixed-methods study designs to follow the identified teacher typologies into their first five years of teaching (which are critical to teacher professional development) and analyze more in-depth participants' changes in their teaching motivations, their views about teaching and their changes to teaching beliefs.

It is possible that participants from particular typologies identified in our study might make dramatic changes over time due to their teaching experiences, their desire to grow professionally and their ability to adapt to the realities of teaching (which could be different than their initial motivations and beliefs about the profession). The prediction model from our study cannot account for a high level of variation, thus, leaving us to restrain from any conclusive statements. Also, future studies can examine if certain identified teacher typologies are more prone to remain in teaching compared to others, and if there are differences with respect to their students' academic achievements.

Moreover, longitudinal studies could examine initial professional goals (e.g., motives and beliefs about teaching) and follow participants from all typologies into their teaching profession to further examine their goal development. Also, what appears over time as a persistence of beliefs about teaching may be explained by a person's early socialization into the teaching profession (Thomson et al., 2012, 2019). Future research in this area may help explain teacher attrition as being related to an existing gap between prospective teachers' beliefs about teaching and the reality of teaching practice.

Research studies on prospective teachers show that teacher education courses did little to prepare them for real classroom experiences and participants often referred to the existing gap between theory and practice in training. Curriculum implementations regarding professional socialization may help prospective teachers clarify their views of teaching and reflect on their motivation for teaching and on their career choices. By addressing these issues in various contexts (e.g., in the course content combined with students' teaching internship), the gap between theoretical and practical aspects of teacher training can be reduced. Teachers' beliefs and expectations are more realistic if support is provided through practical training in the school setting and with more support from administration.

References

Berndt, T. J. (2004a). Children's friendships: Shifts over a half-century in perspectives on their development and their effects. *Merrill Palmer Quarterly, 50*(3), 206-223.

Alliance for Excellent Education. (2005). Teacher attrition: A costly loss to the nation and to the states. Retrieved from www.all4ed.org/files/archive/publications/TeacherAttrition.pdf.

Berger, J-L. & D'Ascoli, Y. (2012). Becoming a VET teacher as a second career: investigating the determinants of career choice and their relation to perceptions about prior occupation. *Asia-Pacific Journal of Teacher Education, 40*(3), 317-341.

Berger, J.-L., & Girardet, C. (2020). Vocational teachers' sense of responsibility: Its motivational basis and relevance for classroom management style. *European Journal of Teacher Education, 44*(2), 200-216.

Berger, J-L. & Girardet, C. (2021). Vocational teachers' classroom management style: the role of motivation to teach and sense of responsibility. *European Journal of Teacher Education*, 1-17.

Chittum, J. R., & Jones, B. D. (2017). Identifying pre–high school students' science class motivation profiles to increase their science identification and persistence. *Journal of Educational Psychology, 109* (8), 1163.

Cochran-Smith, M., & Zeichner, M. (2005). *Studying teacher education. The Report of the AERA Panel on research and teacher education.* Published for the American Educational Research Association by Lawrence Erlbaum Associates, Inc.

Fokkens-Bruinsma, M., & Canrinus, E. T. (2012). The factors influencing teaching (FIT)-choice scale in a Dutch teacher education program. *Asia-Pacific Journal of Teacher Education, 40*(3), 249–269.

Guarino, C., Santibanez, L., & Daley, G. (2006). Teacher recruitment and retention: A review of the recent empirical literature. *Review of Educational Research, 76,* 173-208.

Ingresoll, R. M., & Smith,T. M. (2004). Do teaching induction and mentoring matter? *NASSP Bulletin, 88*(638), 28-40.

Ivosev, G., Burton, L., & Bonner, R. (2008). Dimensionality reduction and visualization in principal component analysis. *Analytical Chemistry, 80*(13), 4933-4944.

Kilinc, A., Watt, H. M. G., & Richardson, P. W. (2012). Factors influencing teaching choice in Turkey. *Asia-Pacific Journal of Teacher Education, 40*(3), 199–226.

Konig, J., & Rothland, M. (2012). Motivations for choosing teaching as a career: effects on general pedagogical knowledge during initial teacher education. *Asia-Pacific Journal of Teacher Education, 40*(3), 289–315.

Kyriacou, C., & Coulthard, M. (2000). Undergraduates' views of teaching as a career choice. *Journal of Education for Teaching, 26,* 117-126.

Lauermann, F., & Karabenick, S.A. (2011). Beliefs about teaching: motives for teaching, sense of responsibility and approaching to instruction. Paper presented at the European Association for Research on Learning and Instruction **(**EARLI) International Conference, Exeter, UK.

Mooi, E.A. & Sarstedt, M. (2011). *A concise guide to market research: the process, data, and methods using IBM SPSS Statistics.* Springer, Heilderberg (DE).

Müller, K., Alliata, R., & Benninghoff, F. (2009). Attracting and retaining teachers: A question of motivation. *Educational Management Administration & Leadership, 37*(5), 574–599.

National Council on Teacher Quality (NCTQ, 2004). Attracting, developing, and retaining effective teachers.

Report to U.S. Department of Education, International Affairs Office, Washington D.C., 2004.

National Commission on Teaching and America's Future. (NCTA, 2007). *Policy brief: The high cost of teacher turnover*. New York: Author.

Organization for Economic and Co-operation and Development (2009). *Creating effective teaching and learning environments: First results from TALIS*. Paris: OECD.

Pajares, F. (1996). Self-efficacy beliefs in achievement settings. *Review of Educational Research, 66,* 543–578.

Parkes, K.A. & Jones, B.D. (2012). Motivational constructs influencing undergraduate students' choices to become classroom music teachers or music performers. *Journal of Research in Music Education, 60*(1), 101–123.

Pop, M., & Turner, J. E. (2009). To be or not to be…a teacher? Exploring levels of commitment related to perception of teaching among students enrolled in a teacher education program. *Teachers and Teaching Theory and Practice, 15*(6), 683–700.

Richardson, P. W., Watt, H.M.G. (2005). I've decided to become a teacher': Influences on career change. *Teaching and Teacher Education*, 21, 5, 475-489.

Rinke, C. (2008). Understanding teachers' careers: Linking professional life to professional path. *Educational Research Review, 3*, 1-3.

Smethem, L. (2007). Retention and intention in teaching careers: Will the new generation stay? *Teachers and Teaching: Theory and Practice, 13*(5), 465–480.

Smith, L.K., & Southerland, S.A. (2007). Reforming practice or modifying reforms? Elementary teachers' response to the tools of reform. *Journal of Research in Science Teaching, 44*, 396-423.

Taimalu, M., Luik, P., Voltri, O., & Kalk, K. (2011). Teaching motivations among teacher trainees and first-year teachers in Estonia. Paper presented at the *European Association for Research on Learning and Instruction (EARLI) International Conference,* Exeter, UK.

Thomson, M. M., & Berger, J.-L. (2021). Comparative perspectives on motivations and values among novice teachers. *IAFOR Journal of Psychology & the Behavioral Sciences, 7*(1), 51-66.

Thomson, M. M., Turner, J.E., & Nietfeld, J. (2012). A typological approach to investigate motivation for teaching and beliefs about teaching of preservice teacher candidates. *Teaching and Teacher Education, 28*, 324-335.

Thomson, M. M., & McIntyre, E. (2013). Teachers' professional goals: An examination of different teachers' typologies with respect to motivations and beliefs about teaching. *Teacher Development, 17(4),* 409-430.

Thomson, M.M., & Palermo, C. (2014). Preservice teachers' understanding of their professional goal: Case studies from three different typologies. *Teaching and Teacher Education, 44*, 56–68.

Thomson, M.M., & Palermo, C. (2018). Using an expectancy-value model to understand teaching motivation among nontraditional preservice teachers: A phenomenological study approach. *Action in Teacher Education, 40* (2), 151-168.

Thomson, M.M., Huggins, E. & Williams, W. (2019). Developmental science efficacy trajectories of novice teachers from a STEM-focused program: A longitudinal mixed- methods investigation. *Teaching and Teacher Education, 77*, 253-265.

Thomson, M.M., Walkowiak, T., Whitehead, A., & Huggins, E. (2020). Mathematics teaching efficacy and developmental trajectories: A mixed-methods investigation of novice K-5 teachers. *Teaching and*

Teacher Education, 87, 1-14.

Thomson, M.M., & Berger, J.-L. (2021). Comparative perspectives on motivations and values among teachers. *IAFOR Journal of Psychology & the Behavioral Sciences, 7*(1), 51-66.

Tschannen-Moran, M., & Woolfolk Hoy, A., (2001). Teacher efficacy: Capturing an elusive concept. *Teaching and Teacher Education, 17*, 783–805.

Ware, H., & Kitsantas, A. (2007) Teacher and collective efficacy beliefs as predictors of professional commitment. *The Journal of Educational Research, 100*(5), 303–310.

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

Watt, H.M.G., & Richardson, P. W. (2008). Motivations, perceptions and aspirations concerning teaching as a career for different types of beginning teachers. *Learning and Instruction, 18*, 408-428.

Watt, H.M.G., & Richardson, P. W. (2011). *Teachers' profiles of professional engagement and career development in Australia and the U.S.* Paper presented at the European Association for Research on Learning and Instruction (EARLI) International Conference, Exeter, UK.

Watt, H.M.G., Richardson, P.W., Klusmann, U., Kunter, M., Beyer, B., Trautwein, U., & Baumert, J. (2012). Motivations for choosing teaching as a career: An international comparison using the FIT-choice scale. *Teaching and Teacher Education, 28*, 791-805.

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, *92*(4), 548-573.

Author Information

Margareta M. Thomson

https://orcid.org/0000-0002-9030-9196

North Carolina State University

Raleigh, NC 27695

U.S.A.

Contact e-mail: *margareta_thomson@ncsu.edu*

Zarifa Zakaria

https://orcid.org/0000-0002-0241-4018

North Carolina State University

Raleigh, NC 27695

U.S.A.

Jean-Louis Berger

https://orcid.org/0000-0003-2629-2622

University of Fribourg

Av. de l'Europe 20, 1700 Fribourg

Switzerland

Appendix A. Subscales for Motivation, Instructional Beliefs and Efficacy (*N*=327)

Measure/Scale	Mean	SD
1. FIT-Choice		
Motivation		
Intrinsic career value	5.73	1.16
Ability	5.81	1.05
Enhance social equity	5.70	1.32
Shape future of young people	6.12	1.11
Make social contribution	5.96	1.16
Work with young people	6.12	1.09
Job security	4.28	1.40
Time for family	3.82	1.43
Opportunity	3.21	1.51
Antecedent socialization		
Prior teaching and teaching experiences	5.64	1.28
Social influences	3.93	1.66
Social dissuasion	4.64	1.62
Perceptions of teaching		
High demand	6.12	0.94
Expert career	5.54	1.15
Good salary	2.15	1.23
Social status & Teacher morale	4.03	1.27
2. TALIS		
Constructivist Beliefs	5.49	0.84
Traditional Beliefs	3.48	0.97
3. TSE		
Student Engagement	7.53	0.99
Instructional Strategies	7.76	0.94
Classroom Management	7.50	0.84

Note: 1. FIT-Choice Scale (Watt, & Richardson, 2007); 2. TSE, *Teacher's Sense of Efficacy Scale* (Tschannen-Moran, & Woolfolk Hoy, 2001); 3. TALIS, *Teaching and Learning International Survey* (OECD, 2009).