Relationships between teachers' professional values, attitudes, and concerns about the profession in Turkey

Osman Aktan
Ministry of National Education, Turkey
Çetin Toraman
Çanakkale Onsekiz Mart University, Turkey
Şenol Orakcı
Aksaray University, Turkey

This study utilised a relational screening model to explore the relationships between teachers' professional values, attitudes, and concerns towards the teaching profession, and whether or not teachers' professional values predict their attitudes towards the teaching profession when the level of concern is taken as a mediator variable. As data collection tools, the *Professional Values Scale for Teaching Profession, Anxiety Scale for Teaching Profession*, and *Attitude Scale for Teaching Profession* were administered to 712 teachers from Düzce province in Turkey. From the results we derive a strong recommendation about enabling undergraduates considering teaching as a career to better develop and strengthen their commitment to this profession. More policies should also be developed to improve the status and society's valuing of the teaching profession, as well as increasing the quality of pre-service training of teachers, and the continuing professional development of current teachers, in order to decrease their professional concerns.

Introduction

Developments in the scientific, technological, economic and social fields that have gained rapid momentum have changed the roles of teachers and students in schools and educational practices (Griffin, McGaw & Care, 2012). To enable students to have basic skills that these changes and developments require is one of the primary aims of education (Jacobson-Lundeberg, 2016; Ujlakyné Szucs, 2009). In this process of change and development, it is understood that teachers who are one of the main components of the education system have the power to influence the education system (Dolton, Marcenaro-Gutierrez, De Vries & She, 2018; Metzler & Woessmann, 2012).

The level of development of countries is closely linked with the quality of education, which is closely linked with the quality of teachers. A common characteristic of the education systems of countries which are at the forefront in international examinations and evaluations is competent teachers (Barber & Mourshed 2007). A competent teacher is one of the most substantial elements of a quality education system (Chong & Cheah, 2009). Academic competence of teachers, their work in their profession, and their professional seniority are vital factors that affect their students' learning achievements (Darling-Hammond, 2010). Improving the quality of the education system in a country requires a teaching profession with sufficient power and high qualifications (Akyüz, 2013), including the special knowledge, skills and competences that teachers should have for their roles in a school and in the education system (Cemaloğlu, 2014). A teacher also should possess positive attitudes, as this has an impact on the quality of education

(Dağlıoğlu, 2010). Developing positive attitudes and professional self-efficacy are important components in teachers' development through attaining professional qualifications (Kahyaoğlu & Yangın, 2007).

Professional qualifications

In 2017 Turkey's Ministry of National Education (MoNE) promulgated a single, integrated professional qualifications framework which included all fields of the teaching profession, instead of determining specific area competences related to each field of teaching. In this context, the general competencies of the teaching profession comprise "professional knowledge", "professional skills" and "attitudes and values" (MoNE, 2017a). Of these, "attitudes and values" are especially important.

Professional attitudes

Attitude can be expressed as an individual's positive or negative attitudes towards an object, event or situation (Atkinson, Atkinson, Smith, Bem & Hoeksema, 2010; Eagly & Chaiken, 2007). In addition, attitudes may be defined as acquired and psychological variables that direct an individual's behaviour (Tavşancıl, 2014). Professional attitudes consists of a combination of an individual's emotion, behaviour towards the profession, and professional loyalty (Hammer, 2000). Today's teachers are expected to improve competences, and to play roles in line with these characteristics. Teachers who have positive attitudes towards their profession are more successful in performing these roles (Bozdoğan, Aydın & Yıldırım, 2007; Helvacı, 2009; Malm, 2009; Ünlü, 2011). In some studies, anxiety has been determined to be one of the significant factors influencing attitudes (Blazar & Kraft, 2017).

Professional values

These include the judgments and beliefs that shape people's preferences and behaviours, and influence their decisions (Aktan, 2018). Professional values can be expressed as valuable, meaningful and preferable characteristics for the individual (Atli, 2012), and also can be expressed as attitudes and beliefs towards the profession. Professional values play a critical role in education and career choices, as individuals generally tend to choose professions suitable for their professional values (Liu & Lei, 2012). Professional values may be considered in three dimensions, cognitive, affective, and behavioural. The cognitive dimension is composed of cognitive criteria in the choice of profession; the affective dimension is composed of job satisfaction including pleasure and happiness; and the behavioural dimension is one's choice of the most appropriate profession, his/her professional adjustment, and being successful in the profession (Hartung, 2006). Professional values include professional characteristics such as friendship, cooperation, teamwork, solidarity, productivity, satisfaction, excitement, horizontal and vertical careers, prestige, economic gain, risk-taking, occupational safety, social security, and benevolence (Aguado, Garcia, Laguador & Deligero, 2015; Brady, 2011; Choi, Kim, Jang, Jung, Ahn & Lee 2013; Coughlan, 1969). Professional attitudes towards the teaching profession play a critical role in the internalisation of teachers' professional values. An attitude developed

for a particular profession is the most important determinant of success in that profession (Camadan & Duysak, 2010).

Professional concerns

In general, it can be said that anxiety comprises worried thoughts and unpleasant emotions, with feelings of fear, distress, uncertainty, failure, state of uneasiness, loss of control, and an expectation about facing bad situations (Sapir & Aranson, 1990). The fact that teachers continue their profession successfully is closely related to the fact that they do not have feelings of concern towards their profession (Taşğın, 2006).

Teachers' professional concerns towards the teaching profession may be discussed under three headings, concern with self, concerns for the performance of the profession, and concerns with pupils. The teacher is the source of concern with self. Concerns for the performance of the profession are related to the teaching dimension of the profession. The teacher is concerned about fulfilling his/her profession in the most proficient manner and therefore begins to explore the innovations and developments in his/her field. Concerns with pupils comprises the ways in which a teacher can meet each student's cognitive, affective and social needs in the best possible way (Fuller, 1969).

Related studies

Examining studies carried out in Turkey and abroad, it can be said that research on professional attitudes, professional concerns towards the teaching profession and teachers' professional values has increased in recent years. The research has included studies about the relationship between professional attitudes and concerns towards the teaching profession (Al-Mehrzi et al., 2011; Altun, 2015; Kalemoglu Varol, Erbas & Unlu, 2014), and the relationship between professional values and attitudes (Mat Ali & Panatik, 2013; Bektaş & Nalçacı, 2012; Liu & Lei, 2012; Parlar & Cansoy, 2017; Schleicher, Hansen & Fox, 2011; Uzun, 2018).

The relationship between professional attitudes and concerns appears to be the most extensively studied, whilst studies of the relationship between professional values and attitudes were limited, and studies investigating the relationship between professional concerns and values were not found.

Purpose of this study

Professional attitudes, concerns, and values are important variables affecting the teaching profession. Literature reviews show that there were few studies into all of the relationships between professional concerns, attitudes and values, which positions this study as an important contribution to the literature. Therefore, the questions below were addressed.

Is there a significant relationship between professional concerns, values, and attitudes towards the teaching profession?

Is professional values a significant predictor of attitudes towards the teaching profession when the level of professional concerns is taken as a mediator variable?

Method

The relationships between professional concerns, attitudes and values towards the teaching profession were examined in the study. Therefore, this is a relational screening model (Fraenkel, Wallen & Hyun, 2012).

Study group

A total of 712 teachers at schools in the central district of Düzce participated. Of these, 509 (71%) were female and 203 (29%) male; 201 (28%) were primary school teachers, 156 (22%) Turkish, 105 (15%) Turkish language and literature, 128 (18%) mathematics; 44 (6%) science, 11 (2%) physics, 13 (2%) chemistry, 10 (1%) biology, 28 (4%) social sciences, 9 (1%) history, and 7 (1%) geography teachers. A purposive sampling method was adopted, on the basis of not studying with all, but only a selected part of the mass (Şenol, 2012). Volunteer students acted as assistants in the data collection conducted during January to March, 2018. Data analyses and completing the research took place during April to June, 2018.

Data collection tools

In this study, the data collection tools were scales concerning the teaching profession, named *Values*, *Concerns*, and *Attitudes*.

Values scale
This scale was developed by Tunca and Saglam (2013). It aims to determine the values that teachers have, and to determine what teachers will favour or oppose while meeting the requirements of the profession, in addition to determining what attitude they will assume when they encounter any events or situations (Tunca & Sağlam, 2013). In this research, the scale was selected in order to determine the professional values of teachers, to reveal the relationship of professional values with professional attitudes and concerns, and also to contribute to the development of pre-service and in-service teacher education. The scale consists of 24 five-point Likert type items, and has four sub-dimensions.

Five items under the sub-dimension of "being against violence" of the scale are scored in reverse. The maximum score for the scale is 120 and the minimum score is 24. Getting a high score indicates that the level of having values is high. The fit indices derived from confirmatory factor analysis are χ^2/df = 2.29; RMSEA = 0.06; GFI = 0.88; AGFI = 0.86; and NNFI = 0.92. The values obtained are acceptable according to the literature (Özdamar, 2013; Şimşek, 2007). The internal consistency coefficients of the four dimensions of the scale were between 0.70 and 0.78. The total reliability of the scale is 0.82.

Concerns scale

This was developed by Köklükaya and Güven Yıldırım (2016) to determine teachers' concerns. The scale consists of 35 five-point Likert type items, and four sub-dimensions. The quality education of individuals who make up society is directly related to the training of quality teachers. With this scale, it is thought that elimination of concerns about the teaching profession and removing uncertainties that lead to these concerns will contribute to the development of the teaching profession (Köklükaya & Güven Yıldırım, 2016). Professional concerns may be a variable that negatively affects teachers' professional values and attitudes. Based on the findings to be obtained by it, the scale was thought to contribute to development of values and attitudes towards the teaching profession and literature on teacher education, which motivated the researchers to use the scale in this study.

The maximum score of the scale is 175 and the minimum score is 35. Getting a high score shows that the level of concerns is high. The consistency values of the sub-dimensions of the scale vary between 0.71 and 0.87. The internal consistency coefficient of the whole scale is 0.92.

Attitudes scale

This was developed by Üstüner (2006) to find out teachers' attitudes. Teacher training programs aim to ensure that the teaching behaviours in professional life are effective with respect to knowledge, attitudes and skills attained by students. One of the conditions for individual teachers to fulfil professional requirements more effectively is that their attitudes towards the profession should be positive. Attaining positive attitudes towards the profession is very important for improving teachers' professional competencies (Üstüner, 2006). The literature reveals that attitude and professional values are important variables that affect each other (Mat Ali & Panatik, 2013; Bektaş & Nalçacı, 2012; Liu & Lei, 2012; Parlar & Cansoy, 2017; Schleicher, Hansen & Fox, 2011; Uzun, 2018). The professional values of individuals can be effective in shaping their professional attitudes towards the events and situations experienced during their teaching activities. To reveal the relationships between professional attitudes and professional concerns, and to contribute to development of teachers' professional competencies based on the findings obtained from correlation analyses, the researchers elected to use this scale.

It is a unidimensional 5-point Likert-type scale, with one factor and 34 items, including 10 items scored in reverse order. The maximum score is 170 and the minimum score is 34. Getting a high score indicates that the level of teachers' attitudes is high. The test-retest reliability of the scale was 0.72. The internal consistency coefficient of the scale was determined as 0.93.

Data analysis

The data obtained from three scales were transferred to a statistical package program with reverse scoring applied where required. A few missing values were filled with means after testing with *EM Missing Value Analysis* which showed that the missing values were randomly distributed. After this procedure, items were collected and means and standard

deviations were obtained from the scales. Correlation analysis and the relationships in the path diagram were also analysed with total scores obtained from the scales.

In the data analysis, correlation analyses and path analysis application were undertaken with regard to the research questions. According to Özdamar (2013), "data should be multivariate normally distributed for variance and covariance matrixes to be positively defined" (p.19). Presuppositions such as "all univariate distributions are normal", "each variable is normally distributed for each value of each other variable", "all bivariant distributions are linear and distribution of residuals is homoscedastic" need to be valid (Kline, 2011). A *Kolmogorov-Smirnov Normal Distribution Test* was applied to the scores obtained from the Values, Concerns, and Attitudes towards the teaching profession scales (Green & Salkind, 2008; Özdamar, 2013). It was found that the scores obtained from all scales showed normal distribution ($p < .05$). In addition, the *Doornik-Hansen Test* was conducted to confirm the multivariate normal distribution for the data.

Results

Descriptive statistics for the scores obtained from the three scales are shown in Table 1.

Table 1: Descriptive statistics

	Values scale	Concerns scale	Attitudes scale
N	712	712	712
Lowest, highest possible scores	24, 120	35, 175	34, 170
Mean ± Std. error of mean	91.70 ± 0.31	69.73 ± 0.70	115.68 ± 0.39
Median	93.00	70.00	117.00
Mode	95	77	120
Std. deviation	8.332	18.673	10.389

In the cases of the Values scale and the Attitudes scale, the means found were substantially higher than one half of the maximum possible scores, suggesting an indication of positive professional values and positive attitudes towards the teaching profession. In the case of the Concerns scale, the mean found was substantially lower than one half of the maximum possible score, suggesting an indication that teachers' concern levels were low.

Results for relationships between the three scales are shown in Table 2.

Table 2: Relationships between the Concerns, Attitudes and Values scales

Scales	N	r	p
Values * Concerns	712	-0.185	0.000
Values * Attitudes	712	0.484	0.000
Concerns * Attitudes	712	-0.077	0.041

There was a low level, significant and negative correlation between Values and Concerns (r = -0.185, p <.05). As Values increases, the level of Concerns tends to decrease, and Values decreases when the level of Concerns increases. There was a positive, moderately significant relationship between Values and Attitudes (r = 0.484, p <.05). As Values increases, Attitudes tend to be more positive. A low level, significant and negative correlation (r = -0.077, p <.05) was found between Attitudes and Concerns. Attitudes will tend to negative as the level of Concerns increases; likewise, as Attitudes becomes positive, the level of Concerns will decrease, though only to slight extents.

This study also aimed to investigate whether or not Values is a significant predictor of Attitudes when the level of Concerns is taken as a mediator variable. As Baron and Kenny (1986) pointed out, "full mediating variable effect shows the ability to zero the relationship between explanatory variable and explained variable" (p. 1176). Therefore, as a result here, Concerns is expected to reduce the relationship between Values and positive Attitude towards the teaching profession. As shown in Table 2, there is a positive, significant relationship between Values and positive Attitude towards the teaching profession. The diagram of the path analysis is presented in Figure 1.
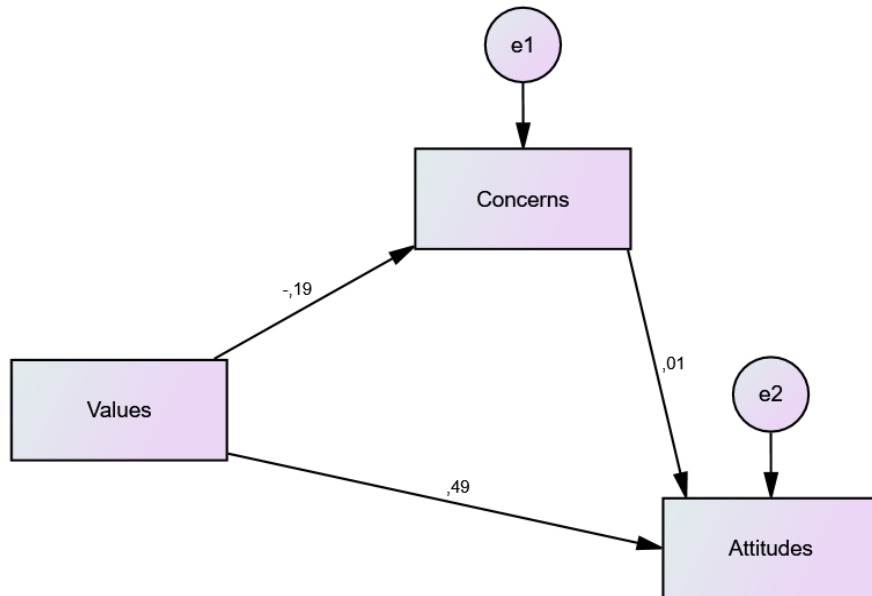

Figure 1: The impact of professional Values on professional Attitudes towards teaching profession with level of professional Concerns towards the teaching profession taken as a mediation.

The fit indices for the path analysis shown in Figure 1 are as follows: RMR = 0.049; GFI = 0.954; NFI = 0.992; IFI = 0.933; CFI = 0.945; χ^2/df = 2.133; RMSEA = 0.051. The model was verified according to the fit indices (Kline, 2011; Özdamar, 2013). The regression estimations for the model are given in Table 3.

Table 3: Estimations in path analysis model

Variables	Estimate	Standard error	z	p
Values, Concerns	-0.42	0.08	-5.03	0.000
Concerns, Attitudes	0.01	0.02	0.41	0.681
Values, Attitudes	0.61	0.04	14.60	0.000

Values is a significant negative predictor of Concerns (p <.05). The increase in Values has a decreasing effect on Concerns. Values is a positive predictor of Attitudes (p <.05). The increase in Values makes Attitudes positive. According to path analysis, Concerns functions as a mediator variable as well as reducing the significant effect of Values on Attitudes.

Discussion

This study found a low level, significant and negative correlation between teachers' Values and Concerns. As Values increases, the level of Concerns decreases, and Values decreases when the level of Concerns increases. Values includes professional characteristics such as friendship, cooperation, teamwork, solidarity, productivity, satisfaction, excitement, benevolence, caring to be healthy and professional development (Aguado, Garcia, Laguador & Deligero, 2015; Brady, 2011; Choi et al., 2013; Coughlan, 1969). It can be suggested that Values is effective in coping with concerns and problems that will arise in teachers' professional lives and thus reducing their Concerns.

The results revealed that there was a positive, moderately significant relationship between Values and Attitudes. As Values increases, teachers' Attitudes can be said to be more positive. As a reason, it can be suggested that a person's choice of the teaching profession with an idealistic and conscious attitude is effective. In studies that examined the relationship between teachers' Attitudes and their Values, a positive and significant relationship has been found, which supports the findings of this study (Mat Ali & Panatik, 2013; Bektaş & Nalçacı, 2012; Liu & Lei, 2012; Parlar & Cansoy, 2017; Schleicher, Hansen & Fox, 2011; Uzun, 2018). The fact that teachers have positive attitudes and values such as loving their profession and having respect for it, contributes to their professional performance (Dikmen & Tuncer, 2018). From the research reported here, it can be suggested that Values is effective in developing a positive Attitude towards the teaching profession.

The results showed a low level, significant and negative correlation between Attitudes and Concerns. Based on these results, it can be suggested that an increasing level of professional Concerns may affect their Attitudes towards the teaching profession negatively. The results of the study are partially similar to other studies investigating the relationships between Concerns and Attitudes, that have found a low level, significant and negative correlation between teachers' Attitudes and their Concerns (Al-Mehrzi et al., 2011; Altun, 2015; Kalemoğlu Varol, Erbaş & Ünlü, 2014). In addition, it is known that teachers who have a positive attitude towards teaching profession are more successful

(Bozdoğan, Aydın & Yıldırım, 2007; Helvacı, 2009; Malm, 2009; Ünlü, 2011). From the research reported here, it can be suggested that teachers' having a positive attitude towards their profession decreases Concerns.

The results revealed that Values is a significant negative predictor of Concerns. An increase in Values has a decreasing effect on Concerns. Earlier research has shown that Values and Attitudes are related to students' course achievements, their attitude and interest towards courses, and their motivation (Collinson, 2012). Developing teachers' professional qualifications (Donmuş, Akpunar & Eroğlu, 2017) and informing them about values (Altınkurt & Yılmaz, 2011) can reduce the concerns they may experience.

According to the research results, Values is a positive and significant predictor of Attitudes. An increase in Values has an increasing effect on Attitudes, which can be explained by the value towards the teaching profession given by teachers who are loving their teaching profession (Durmuşçelebi, Yıldız & Saygı, 2017). Teachers having positive attitudes in terms of both Attitudes and a lack of Concerns (Taşğın, 2006) can be expressed as a positive impact on their Values.

Finally, it was determined that Concerns functioned as a mediator variable as well as reducing the significant effect of Values on Attitudes. Other research has shown that teachers' Concerns affected their Values and their Attitudes negatively and caused them to experience professional failures (Bozdoğan, Aydın & Yıldırım, 2007; Helvacı, 2009; Malm, 2009; Ünlü, 2011), supporting the findings of this study.

Considering the results of this study, it can be said that teachers with professional values and attitudes experienced less professional concerns, and increased professional concerns decreased both professional attitude and professional values, which may create a risk in terms of sustaining the profession and providing successful professional development.

Improving the economic circumstances of the teaching profession can be effective in making it a desired and sustainable profession (Tedmem, 2019). According to The Organisation for Economic Co-operation and Development (OECD) data, the average teacher's starting salary is about US$34,230, and the top salary is about US$60,677. In Turkey, the average teacher's starting salary is about US$25.955, and the top salary is about US$32,953 (OECD, 2019). However, in recent years teaching has become a more desirable profession for economic security in Turkey (Doğan, 2018). As a result, there has been a strong demand to enter into the teaching profession, from every segment of society (Tedmem, 2016). Many students entering education faculties come from families of low socio-economic status who live in urban areas (Aksu, Engin Demir, Daloğlu, Yıldırım & Kiraz, 2010). Economic arrangements such as the establishment of a professional career development system according to seniority in teachers' salaries, and increasing teachers' salaries to become closer to the OECD average can attract students from higher socio-economic status and higher level of success to choose teaching as a career (Orakcı, 2015). These trends can increase the social status of the teaching profession. Well-qualified students choosing teaching as a career contributes to the

training of future teachers with high socio-cultural capital, less likely to experience professional concerns.

According to the Teaching and Learning International Survey (TALIS) 2018 results conducted by the OECD, the average age of secondary school teachers in 48 countries participating in the research is 44. Turkey is the country that has the youngest average age of teachers, with average age of 35.5. About 25% of teachers in Turkey are under the age of 30, while the proportion of teachers 50 or older is only 6.3%. It can be hoped, perhaps confidently, that teaching staff in Turkey comprise young and dynamic teachers. According to another finding from TALIS 2018, the proportion of teachers who feel self-sufficient in Turkey is above the OECD average (OECD, 2019). However, international exam indicators (MoNE, 2018) show that the results regarding teachers' professional qualifications may be based on subjective evaluations and teachers' competencies are not well-reflected in student learning outcomes.

In 2018, targets were set in Turkey's *Education Vision 2023* from MoNE. This document emphasises preparatory work being undertaken for the adoption of the *Teaching Profession Law*, a new model of professional development being designed, and professional development activities being supported with postgraduate education. In other words, it can be said to provide a sustainable roadmap in line with what the transformation of Turkey and the world requires (MoNE, 2018a). On the other hand, out of the countries that participated in TALIS 2018, Turkey has only 6.3% of teachers with masters degrees and 0.2% of teachers with doctoral degrees. Compared to the average of OECD countries, the proportion of teachers with postgraduate education is very low, even though postgraduate education motivates teachers to undertake personal and professional developments (Kovalchuck & Vorotnykova, 2017; Orakcı, 2020). Postgraduate education can mediate the reduction of teachers' professional concerns as it provides continuity in professional development and enhances professional values and attitudes.

With regard to professional competencies prepared for the teaching profession (MoNE, 2017a) and the teacher strategy document prepared for teacher education (MoNE, 2017b), there are sub-competency areas and development goals concerning pre-service prospective teachers gaining professional values. Based on the findings reported here, equipping teachers with competencies related to professional values can enable them to be better trained for minimising the concerns they may experience.

Teachers with positive attitudes and professional values are more successful in their profession (Pantic & Wubbels, 2010). Enabling prospective teachers to have positive attitudes towards the profession and professional values can be counted among the missions of faculties of education. To fulfil this mission, faculties of education need to be strengthened with regard to human resources, and social and physical infrastructures. In order to reduce teachers' concerns during their teaching careers, teacher education institutions with the cooperation of the Ministry of Education can also take greater responsibilities for in-service teacher education.

The results of this study indicate the importance of helping undergraduates considering teaching as a career to develop and strengthen their commitment to teaching as a profession. In addition, it is strongly recommended to develop policies to increase the status and Values of the teaching profession, and to improve the quality of pre-service training of teachers and the professional qualifications of current teachers, thereby decreasing their Concerns.

Conclusion

This study indicates that as teachers' professional Values increased, their professional Concerns decreased, and that their Concerns could decrease their Values. Another result is that the increase in teachers' professional Values positively affected their Attitudes towards the teaching profession. In addition, it was found that Attitudes towards the profession became negative as professional anxiety increased, and the fact that their professional Attitudes were positive could effect a reduction in their professional anxiety. Similarly, the fact that their professional Concerns increased reduced the positive impact of professional Values on Attitudes.

The development of policies to increase the social value and status of the teaching profession can positively affect attitudes towards the teaching profession. In addition, as a result of recent developments and trends in education, teachers should be better equipped with skills that meet the changing needs of the students and schools. For this purpose, educational policies that will prepare teachers better for changing conditions need to be prepared and applied. In this context, a strengthening of professional education in pre-service teacher education, the selecting of well-qualified teacher candidates, and assigning experienced teachers or teacher educators to professional education programs are necessary, as well as ensuring continuity of professional development, and making more extensive use of the most experienced teachers.

In line with the present findings, including in teacher education programs content and activities that help students to gain professional values and attitudes will be valuable, and should be further supported by in-service continuing professional development. Competent teacher educators training well-qualified students can play a greater role in contributing to the education system of the country and its development level. In the selection of students for admission to a faculty of education, consideration of affective features such as loving the teaching profession may help facilitate the foundations for professional values and attitudes.

Limitations

According to the results of the study, a negative relationship was found between teachers' Attitudes towards the profession and their Concerns about the teaching profession, but this relationship is slight, close to zero. This study determined that professional Concerns negatively affected both professional Values and professional Attitudes, but more comprehensive studies could be conducted into causes of professional concerns experienced by teachers, and into refinements of the scales, and matters such as using

such scales for routine, anonymised monitoring purposes. Professional Concerns were taken as a mediator variable in this study, so future studies could investigate professional Values or Attitudes as a mediator variable.

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Appendix 1: Professional values scale

	Statements	Very untrue of me	Untrue of me	Some-what untrue of me	True of me	Very true of me	M	SD
		f %	f %	f %	f %	f %		
1	I warn students who freeze their friends out for any reason (anti-sociality. physical properties. etc.).	17 2.4	20 2.8	13 1.8	261 36.7	401 56.3	4.42	0.86
2	I take care to visit social service institutions such as nursing home. social services and child protection agency at certain intervals.	47 6.6	150 21.1	159 22.3	277 38.9	79 11.1	3.27	1.11
3	I defend the rights of students who are hard done by their disability at school.	3 0.4	0 0	0 0	164 23	545 76.5	4.75	0.49
4	I shout at students who are interrupting teaching (talking to someone, going around in the classroom. etc.) when necessary. (R)	*70 9.8*	*146 20.5*	*44 6.2*	*324 45.5*	*128 18*	*3.41*	*1.27*
5	I participate in activities that will contribute to my personal development (learning foreign languages. playing instruments etc.).	23 3.2	71 10	76 10.7	346 48.6	196 27.5	3.87	1.03
6	I respect the opinions of my colleag-ues who have different perspectives on political. social or cultural issues.	8 1.1	0 0	6 0.8	309 43.4	389 54.6	4.50	0.63

7	I scold students who do not fulfill their responsibilities (not doing their homework. not bringing learning materials. etc.) (R)	*51* *7.2*	*288* *40.4*	*94* *13.2*	*236* *33.1*	*43* *6*	*2.90*	*1.12*
8	I take care to participate in the activities of institutions and organisations that protect natural environment.	3 0.4	77 10.8	62 8.7	388 54.5	182 25.6	3.94	0.90
9	I cooperate with parents to support their children's learning.	9 1.3	6 0.8	77 10.8	282 39.6	338 47.5	4.31	0.79
10	I take care to participate in in-service trainings that will contribute to my professional development.	3 0.4	28 3.9	87 12.2	309 43.4	285 40	4.19	0.83
11	I avoid condescending words and behaviours for slow learning students.	3 0.4	10 1.4	12 1.7	214 30.1	473 66.4	4.61	0.64
12	I use punishment as a tool to prevent crime. (R)	*155* *21.8*	*130* *18.3*	*122* *17.1*	*277* *38.9*	*28* *3.9*	*2.85*	*1.26*
13	I create a classroom atmosphere where different views can be discussed and questioned.	3 0.4	0 0	57 8	323 45.4	329 46.2	4.37	0.67
14	I participate in scientific events such as conferences. symposia. workshops that will contribute to my professional development.	15 2.1	83 11.7	72 10.1	296 41.6	246 34.6	3.95	1.05
15	I constantly communicate with parents to get to know the students better.	3 0.4	12 1.7	49 6.9	341 47.9	307 43.1	4.32	0.71
16	I sincerely listen to the negative criticisms my students, colleagues and administrators make about my opinions or behaviours.	5 0.7	23 3.2	11 1.5	394 55.3	279 39.2	4.29	0.72
17	When I see the students who fight. I intervene physically (slapping. holding on one leg. etc.) when necessary. (R)	*342* *48*	*281* *39.5*	*49* *6.9*	*34* *4.8*	*6* *0.8*	*1.71*	*0.86*
18	I warn my colleagues who discriminate their students in terms of their families' socio-economic level.	16 2.2	59 8.3	83 11.7	286 40.2	268 37.6	4.03	1.01
19	I work as a volunteer trainer in courses organised for illiterate people.	51 7.2	172 24.2	204 28.7	226 31.7	59 8.3	3.10	1.08
20	I set strategies with parents to increase students' motivation levels.	3 0.4	36 5.1	110 15.4	367 51.5	196 27.5	4.01	0.82
21	I watch scientific publications such as books and magazines that will contribute to my professional development.	3 0.4	25 3.5	90 12.6	362 50.8	232 32.6	4.12	0.79

22	I advocate that students who do not consider the warnings should be disciplined by being humiliated when necessary. (R)	*324* *45.5*	*211* *29.6*	*87* *12.2*	*81* *11.4*	*9* *1.3*	*1.93*	*1.07*
23	I advocate that different perspectives or thoughts should be easily expressed in class and school.	3 0.4	0 0	11 1.5	333 46.8	365 51.3	4.48	0.58
24	I encourage my students and parents to participate in activities aimed at protecting natural environment.	3 0.4	6 0.8	50 7	317 44.5	336 47.2	4.37	0.69

Notes: N = 712; (R) = reverse coded item.
The translation of the scale from Turkish to English was done by the authors of the present article based on three field experts' opinions)

Appendix 2: Concerns scale

	Statements	Disagree strongly f %	Disagree f %	Neutral f %	Agree f %	Agree strongly f %	M	SD
1	I think I will not be able to enable students to show interest in the course and keep them motivated.	311 43.7	338 47.5	18 2.5	33 2.5	12 1.7	1.73	0.85
2	I beware of not being able to design activities that will improve students' hand-eye-brain coordination.	162 22.8	352 49.4	52 7.3	130 18.3	16 2.2	2.28	1.08
3	I am sure I will be able to teach lessons for students with different intelligence types. (R)	*3* *0.4*	*51* *7.2*	*136* *19.1*	*320* *44.9*	*202* *28.4*	*3.94*	*0.89*
4	I am worried about not being able to associate the theoretical knowledge taught in the course with examples of daily life.	234 32.9	358 50.3	31 4.4	74 10.4	15 2.1	1.99	0.99
5	I think I do not have necessary skills to use different teaching methods and techniques.	304 42.7	312 43.8	17 2.4	77 10.8	2 0.3	1.82	0.94
6	I am worried about not being fair during the evaluation.	287 40.3	294 41.3	74 10.4	24 3.4	33 4.6	1.91	1.03
7	I am troubled by the thought of teaching when all eyes are on me in the classroom.	409 57.4	251 35.3	31 4.4	15 2.1	6 0.8	1.54	0.75
8	The thought of raising next generations makes me stressful.	290 40.7	244 34.3	18 2.5	129 18.1	31 4.4	2.11	1.24
9	I am afraid of not being able to tell students what I know.	332 46.6	279 39.2	30 4.2	56 7.9	15 2.1	1.80	0.99
10	I think I will never feel fully ready for the lesson.	329 46.2	302 42.4	35 4.9	44 6.2	2 0.3	1.72	0.84

11	The thought of students' complaining to other teachers or their parents makes me worried.	289 40.6	298 41.9	68 9.6	43 6	14 2	1.87	0.95
12	I am worried about not being able to actively engage students.	278 39	317 44.5	59 8.3	56 7.9	2 0.3	1.86	0.89
13	I am anxious that students will fail although I teach them.	112 15.7	326 45.8	63 8.8	183 25.7	28 3.9	2.56	1.15
14	*I can teach my lessons not only theoretically but also practically. (R)*	*244 34.3*	*412 57.9*	*33 4.6*	*3 0.4*	*20 2.8*	*1.80*	*0.79*
15	*I believe I will be an equipped teacher related to my field. (R)*	*302 42.4*	*350 49.2*	*41 5.8*	*16 2.2*	*3 0.4*	*1.69*	*0.72*
16	I doubt that I will be able to provide effective learning.	231 32.4	370 52	56 7.9	53 7.4	2 0.3	1.91	0.85
17	The thought that teacher knows everything causes me to feel panic.	265 37.2	360 50.6	41 5.8	41 5.8	5 0.7	1.82	0.83
18	The phrase "teaching profession is sacred" causes me to feel worried.	277 38.9	346 48.6	13 1.8	76 10.7	0 0	1.84	0.90
19	I am worried about losing control of the class while teaching.	295 41.4	293 41.2	54 7.6	70 9.8	0 0	1.86	0.93
20	I am worried about causing students to have exam anxiety.	257 36.1	333 46.8	31 4.4	91 12.8	0 0	1.94	0.96
21	I feel uneasy for fear that I might discriminate between students based on their course success.	199 27.9	377 52.9	49 6.9	82 11.5	5 0.7	2.04	0.93
22	*I am sure that I will be well prepared for each lesson. (R)*	*168 23.6*	*432 60.7*	*74 10.4*	*35 4.9*	*3 0.4*	*1.98*	*0.76*
23	I am anxious that students will not love me.	265 37.2	322 45.2	81 11.4	38 5.3	6 0.8	1.87	0.87
24	I am worried about not answering every question student ask.	269 37.8	341 47.9	61 8.6	41 5.8	0 0	1.82	0.82
25	I am worried about using technology in lessons.	350 49.2	314 44.1	31 4.4	17 2.4	0 0	1.60	0.69
26	I doubt that I will direct students to do research and question.	286 40.2	364 51.1	46 6.5	16 2.2	0 0	1.71	0.69
27	The thought of being inspected by inspector causes me to feel panicked.	219 30.8	338 47.5	52 7.3	81 11.4	22 3.1	2.09	1.05
28	I am disturbed by the thought that I will not be able to teach lessons suitable for student level.	207 29.1	417 58.6	42 5.9	32 4.5	14 2	1.92	0.84
29	I am worried about not being able to cooperate with my students' parents on their development.	197 27.7	335 47.1	33 4.6	133 18.7	14 2	2.20	1.09
30	I am worried about myself lest I should have a good title in the term "good teacher".	226 31.7	317 44.5	36 5.1	121 17	12 1.7	2.12	1.09
31	I don't trust myself that I will use time effectively in courses.	265 37.2	321 45.1	20 2.8	66 9.3	40 5.6	2.01	1.13

32	The possibility of not being able to do the practices I want due to the technical inadequacies at the school makes me worried.	192 27	258 36.2	69 9.7	136 19.1	57 8	2.45	1.29
33	I am worried about reflecting my own psychological troubles into the classroom.	214 30.1	330 46.3	65 9.1	80 11.2	23 3.2	2.11	1.06
34	I am worried about not being able to manage crisis.	259 36.4	358 50.3	34 4.8	56 7.9	5 0.7	1.86	0.88
35	I am worried about not being the right role model for students.	213 29.9	382 53.7	46 6.5	67 9.4	4 0.6	1.97	0.89

Notes: N=712; (R) = reverse coded item.
The translation of the scale from Turkish to English was done by the authors of the present article based on three field experts' opinions)

Appendix 3: Attitudes scale

	Statements	Disagree strongly f %	Disagree f %	Slightly agree f %	Agree f %	Agree strongly f %	M	SD
1	Even the thought of being a teacher appeals to me.	20 2.8	80 11.2	134 18.8	254 35.7	224 31.5	3.82	1.08
2	Teaching profession is boring for me. (R)	223 31.3	320 44.9	85 11.9	49 6.9	35 4.9	2.09	1.07
3	I think that teaching profession is suitable for me.	14 2	30 4.2	22 3.1	310 43.5	336 47.2	4.30	0.87
4	If I were given an opportunity to choose a profession again. I would choose the teaching profession again.	70 9.8	49 6.9	213 29.9	105 14.7	275 38.6	3.65	1.32
5	I think that teaching does not appeal to me. (R)	274 38.5	281 39.5	63 8.8	60 8.4	34 4.8	2.02	1.11
6	I think teaching is not suitable for my lifestyle. (R)	335 47.1	236 33.1	66 9.3	47 6.6	28 3.9	1.87	1.08
7	I think teaching is not suitable for my personality. (R)	323 45.4	262 36.8	75 10.5	36 5.1	16 2.2	1.82	0.97
8	I regret choosing teaching profession. (R)	273 38.3	229 32.2	82 11.5	77 10.8	51 7.2	2.16	1.25
9	I believe that I will be successful in teaching.	9 1.3	43 6	55 7.7	264 37.1	341 47.9	4.24	0.92
10	I am pleased to have chosen this department on the teaching profession.	25 3.5	45 6.3	104 14.6	252 35.4	286 40.2	4.02	1.06
11	I believe I will be able to overcome the difficulties I will encounter in the teaching profession.	34 4.8	15 2.1	44 6.2	356 50	263 36.9	4.12	0.97
12	I would like to teach even under difficult conditions.	44 6.2	89 12.5	101 14.2	307 43.1	171 24	3.66	1.15
13	I am confident about the requirements of the teaching profession.	3 0.4	43 6	13 1.8	294 41.3	359 50.4	4.35	0.82

14	I think I have a special talent for teaching.	11 1.5	79 11.1	155 21.8	314 44.1	153 21.5	3.73	0.97
15	I think teaching is not a suitable profession for me. (R)	*273* *38.3*	*288* *40.4*	*70* *9.8*	*45* *6.3*	*36* *5.1*	*1.99*	*1.09*
16	I think teaching will give me opportunities to create something.	39 5.5	36 5.1	66 9.3	410 57.6	161 22.6	3.87	0.99
17	I believe I will be able to carry out teaching professionally.	16 2.2	27 3.8	60 8.4	353 49.6	256 36	4.13	0.88
18	The thought of teaching people something they don't know makes me happy.	9 1.3	18 2.5	0 0	375 52.7	310 43.5	4.35	0.73
19	I sympathise with the people who teach.	20 2.8	17 2.4	61 8.6	380 53.4	234 32.9	4.11	0.87
20	The thought that I will be a teacher scares me. (R)	*340* *47.8*	*261* *36.7*	*53* *7.4*	*51* *7.2*	*7* *1*	*1.77*	*0.94*
21	I would not recommend teaching to those who are in the position of choosing a profession. (R)	*180* *25.3*	*231* *32.4*	*186* *26.1*	*34* *4.8*	*81* *11.4*	*2.45*	*1.24*
22	I think I will have a lot to do when I become a teacher.	3 0.4	42 5.9	71 10	339 47.6	257 36.1	4.13	0.85
23	The working conditions of teaching are attractive to me.	113 15.9	147 20.6	151 21.2	217 30.5	84 11.8	3.02	1.27
24	I care about being successful in teaching profession courses.	7 1	0 0	12 1.7	370 52	323 45.4	4.41	0.63
25	I like to chat with teachers.	10 1.4	18 2.5	94 13.2	405 56.9	185 26	4.04	0.79
26	I discuss and talk about education. learning. and teaching.	5 0.7	17 2.4	17 2.4	378 53.1	295 41.4	4.32	0.70
27	I think I will be a knowledgeable and sufficient teacher.	5 0.7	35 4.9	20 2.8	377 52.9	275 38.6	4.24	0.79
28	I believe that teaching will give me dignity in the society.	90 12.6	73 10.3	186 26.1	260 36.5	103 14.5	3.30	1.21
29	I willingly chose teaching program that I am currently studying.	34 4.8	57 8	92 12.9	341 47.9	188 26.4	3.83	1.06
30	I am concerned that teaching prof-ession will cause me difficulties. (R)	*161* *22.6*	*335* *47.1*	*103* *14.5*	*69* *9.7*	*44* *6.2*	*2.30*	*1.11*
31	I find it proud to steer people's lives through my education as a teacher.	9 1.3	0 0	25 3.5	306 43	372 52.2	4.45	0.69
32	I do not like to talk about education. learning. and teaching. (R)	*266* *37.4*	*340* *47.8*	*48* *6.7*	*38* *5.3*	*20* *2.8*	*1.88*	*0.95*
33	When I become a teacher. I believe that the society will give sufficient value to me.	73 10.3	61 8.6	264 37.1	226 31.7	88 12.4	3.27	1.11
34	The continuity of teaching profession gives me confidence.	31 4.4	17 2.4	116 16.3	328 46.1	220 30.9	3.96	0.99

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Note: (R)=reverse coded item.

Osman Aktan received his doctorate in Curriculum and Instruction from Gazi University. He has published several book chapters, articles and conference papers on inclusive education, special education, social acceptance, teacher education, and curriculum and instruction.
ORCID ID: 0000-0001-6583-3765
Email:karakteregitimi@gmail.com

Çetin Toraman received his doctorate in Curriculum and Instruction from Gazi University and in Research Methods and Statistics in Education from Eskişehir Osmangazi University. He is an assistant professor in the Department of Medical Education at Çanakkale Onsekiz Mart University in Turkey. His research interests are medical education, measurement and evaluation in education and curriculum and instruction.
ORCID ID: 0000-0001-5319-0731
Email: toramanacademic@gmail.com

Şenol Orakcı is an assistant professor in the Department of Curriculum and Instruction at Aksaray University in Turkey. His research interests are teacher education, learner autonomy, thinking skills and curriculum and instruction.
ORCID: 0000-0003-1534-1310
Email: senolorak@gmail.com