Full Length Research Paper

Analyzing the relationship between prospective teachers' educational philosophies and their teaching-learning approaches

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The purpose of this research is to analyze the relationship between prospective teachers' educational philosophies and their teaching-learning approaches. The research is a correlational study and a survey model. The working group of the research consists of 328 prospective teachers who received pedagogical formation at Balıkesir University/Turkey in 2013-2014 summer semester. Data were collected through "Detection Scale of Educational Philosophy" and "Scale of Teaching and Learning Approaches". Arithmetic mean, t-test and Pearson moment correlation coefficient were used as statistical analysis. It is concluded in the research that prospective teachers mostly adopt progressivism and re-constructionism philosophies and corresponding constructivist learning approach. Obtained findings demonstrate that with respect to essentialism philosophy and corresponding traditional adoption levels, there was a significant difference in favor of male and female prospective teachers. According to the research results, there is a positive relationship between educational philosophy and teaching-learning approach. Prospective teachers who adopt perennialism and essentialism philosophy mostly use traditional approach whereas prospective teachers who adopt progressivism and re-constructionism philosophies mostly use constructivist learning approach.

Key words: Educational philosophy, teaching-learning approach, perennialism, essentialism, progressivism, re-constructionism, prospective teachers

INTRODUCTION

The attempts to find answers to basic questions to educate "whom", "for what", "what" still continue in modern age. The answers to these questions may alter with respect to different individuals and societies. On the basis of this difference lies the determining role of the educational beliefs and values of societies and indivi-duals. This issue holds even further importance for teachers whose primary responsibility is to shape the individuals and society, since teachers accomplish their mission within the framework of educational philosophy they adopt and the teaching-learning approach corresponding to their educational philosophy.

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Within this frame, the education philosophies and education-teaching understandings of teacher candidates gain importance. The aim of this study is to determine whether the education philosophies and education-teaching understandings of teacher candidates vary according to demographic features or not and to determine the relation between philosophies and education-teaching understandings.

Educational philosophy

Originating from Greek language, the word philosophy is derived from philosohia (Sönmez, 2002). Philosophy is life style, perspective and worldview (Ergün, 2009). In its broadest sense, philosophy is the knowledge domain reflecting one's systematic and comprehensive reasoning on the interaction between man and universe (Gutek, 2001). Pearsall (1998) defines philosophy as the domain focusing on the basic nature of knowledge and such concepts as reality and existence. Philosophy is related to the ways of regulating views and knowledge on life itself and involves one's questioning of his/her perspective as well as others' views. Philosophy implies the search for one's own beliefs and thoughts (Ornstein and Hunkins, 1993). Tozlu and Yayla (2005) define philosophy as the combination of values and knowledge system one possesses and abides by. Accordingly each individual holds a unique philosophy which is also related to one's own power of thinking (Ertürk, 2013).

Philosophy lays the foundation of all the other sciences almost all of which hold its own philosophy (Ergün, 2009). Philosophy makes use of the outputs of science and widens the horizon of science with the questions posited (Kale, 2009). Education is one of the sciences that philosophy maintains close relationship with. The relation between philosophy and education is multi -dimensional and also long-dated (Ekiz, 2007). Human being is the key glue between philosophy and education. Philosophy is the product of human thought. One other significant component of this product is relevance of human education. While philosophy establishes a set of qualities and values for education, education attempts to cluster a system and activities aiming to attain and gain these values to individuals (Demircioğlu, 2000). Stemming from the relation between philosophy and education, educational philosophy can be defined as a philosophical branch treating the problems related to the means, nature, objectives of education via philosophy-specific methods (Cevizci, 2003). Erden (1998) explains educational philosophy's subject area, the whole set of educational theories, practice and components, their interrelations and consistency of relations as the discipline that analyzes via a holistic approach.

The entire education is regulated in line with the philosophy or philosophies that education is based upon (Sönmez, 2002). Educational philosophy probes into the objectives and nature of education as well as basic concepts of education such as learning, teaching, discipline and a number of philosophical questions emerging in educational theories and practices (Yazıcı, 2009). The primary question in educational philosophies relates to the scope and meaning of education. For any given educational philosophy the most meaningful and appropriate explanation is, by answering such questions, presenting an applicable approach for education (Youngs, 1979). This basis philosophy lays the foundation of educational objectives primarily followed by the role of context in reaching the objectives, educational strategy to employ in learning-teaching processes, method-techniques and the evaluation method to adopt (Tekin and Üstün, 2008).

Throughout history, a great number of philosophical movements and a vast body of educational philosophies have emerged from their reflections on education (Tekin and Üstün, 2008), which guide educational practices (Doğanay, 2011). Four educational philosophies mostly agreed upon are; perennialism, essentialism, progressivism and re-constructionism (Ornstein and Hunkins, 1993). These 4 educational philosophies constituting the focal point of this research are explained below.

Perennialism philosophy states that there are absolute universal facts. A human being's essence is the same regardless of time or space. This approach dwells on shaping education in line with in universal facts. Perennialism philosophy claims that the aim of education should be raising the kinds of people with a strong and righteous character. Since the key component of human nature is the mind, intellectual education should be particularly developed in education. As it is argued in this approach the mission of education should be training the individual for life hence the kind of knowledge that can teach both spiritual and material facts could be rendered via classical works (Tozlu, 1997; Fidan and Erden, 1998; Demirel, 2008; Ergün, 2009).

Essentialism philosophy states that the key objective of education must be construed as transferring to young generations the knowledge and skills that proved to be useful in the past. This philosophy commissions the school with the task of protecting and transferring the cultural assets. The lessons are seen as the means to transfer cultural heritage and the main focus is on disciplining the mind. Essentialism argues that verified facts must be transferred to the children and teenagers by teachers while students, via learning by heart, can improve all their mental skills since humans are expected to learn previous knowledge and experiences to advance the civilization. The main focus in this approach is on the teacher and subject area (Tozlu, 1997; Fidan and Erden, 1998; Ergün, 2009; Ornstein and Hunkins, 1993).

According to progressivism philosophy, education is not merely the transfer of ready facts but it is the very life itself. The main argument of this educational philosophy is that education must address to people's interests. As

per this educational philosophy in which teacher is the guide of learner-centered education, learning should be via problem solving and individuals should make meaning of the knowledge useful for him/her via connecting knowledge to real life. Progressivism philosophy puts forth that the individual must learn practical knowledge via actively participating in real life (Tozlu, 1997; Fidan and Erden, 1998; Sönmez, 2002; Cevizci, 2003; Ergün, 2009; Ornstein and Hunkins, 1993).

According to re-constructionism philosophy education is not a means of transformation but a means of balance. In re-constructionism, educational targets are founding world civilization, securing the peace and human happiness, transformation via practice, and gaining the basic values such as love, cooperation and balance. Education has a mission of securing an ideal social order. This philosophy argues that the mission of school should be reshaping and reforming the society (Ergun, 1996; Tozlu, 1997; Sönmez, 2002; Cevizci, 2003; Ergün, 2009; Ornstein and Hunkins, 1993).

In terms of their general characteristics perennialism and essentialism philosophies are classified as traditional philosophies while progressivism and re-construct philosophies are known as modern philosophies (Ornstein and Hunkins, 1993). Adopted educational philosophy is the key determiner of teaching-learning approaches of the teachers commissioned as the executors of educational processes (Demirel, 2008; Yılmaz, Altınkurt & Çokluk, 2011).

Teaching-learning approach

Teaching-learning approach points to the perspectives on teaching and learning methods followed in line with adopted educational philosophy. This approach integrates the meaning of teacher attributes to teaching and learning and the roles of both the teacher and the student (Chan and Elliott, 2004).

Two contrasting main approaches in teaching and learning can be generally named as traditional and modern (Önder and Beşoluk, 2010). Schunk (2009), on the other hand, termed learning approaches as superficial and deep learning. With respect to their qualities superficial learning mostly relates to traditional learning-teaching approach while deep learning is more appropriate for constructivist learning-teaching approach.

Traditional approach follows teacher and subject-centered teaching process. This approach views teacher as the source of knowledge and student as the passive receiver of knowledge. Teachers traditionally convey the knowledge to students via didactic methods and expects them to render correct answers (Chan and Elliott, 2004; Schunk, 2009). In this approach favored mostly in crowded classes where there is limited time for teaching to achieve knowledge-level targets, teacher is the organizer of knowledge and shares it with students to

achieve meaningful learning (Demirel, 2007). Traditional-approach based teaching process means fitting students into the models by disregarding all individualistic differences. In traditional learning approach students are forced to memorize considerable amount of knowledge which causes they fail to understand or interrogate. Since student fails to learn how to learn/he eventually fails to learn by heart in this method (Şahinel, 2010). As per such qualities it is safe to argue that traditional approach is established upon perennialism and essentialism philosophy.

In modern age, the objective of education is to train the kind of individuals who can reflect, question, criticize and find solutions to the problems they could face in real life. This is only possible by practicing an educational approach in which each individual is encouraged to actively participate into his/her own learning process based on the fact that each student has individual characteristics (Şahinel, 2010). Constructivism is among the most popular modern educational approaches.

Having emerged as the theory on how to teach the knowledge to learners, constructivism has in time turned into an approach about the ways learners construct knowledge (Perkins, 1999). Based on Piaget and Vygotsky's theories this approach underscores the gravity of experience in the construction of knowledge and active participation in the learning process (Miller, 1997).Constructivism argues that knowledge cannot be received passively from the environment but constructed via actively exploring. Children can construct new knowledge by reflecting on their physical and mental actions (Clements and Battista, 1990). Being a student-centered approach, learning is not merely a passive reception but rather attainment of knowledge by actively meaning making, gaining experience and using primary knowledge sources. Learning is a subjective and situation ally designed action by environmental factors (Titiz, 2005; Akınoğlu, 2014).

Constructivist approach became an effective movement after the1990s in the designation of teaching programs and putting the programs into action and in Turkey it gained importance with the implementation of teaching programs in 2005-2006 academic year (Doğanay, 2011). In constructivist approach which projects students' active participation in learning process, learners reject to accept the knowledge as it is and knowledge is constructed by associating with previously acquired knowledge (Üredi, 2009). Constructivist teacher should be open-minded, modern, embracing self-development, paying heeds to individual differences and expert in their fields; additionally a teacher is not the transmitter of knowledge but providing suitable learning environments and learning together with the students (Selley, 1999). Parallel to the progressivists, constructivists claim that teachers are the guides of learning, students are responsible for their own learning and learning can take place via meaning full experiences. Drawing a parallelism between teacher's

and student's role, Oliva (2005) argues that constructivism is the continuity of progressivism.

Chan and Elliott (2004) claimed that there is a strong bond, as many studies show, between teachers' beliefs and their in-class actions and learning environment. Additionally, Önder and Beşoluk (2010) claim that learning approach of the teachers may affect the quality of learning outputs of the students they train. Driven from this point of view it is feasible to claim that the learning approaches teachers adopt constitute major place in laying an effective learning environment (Taşkın, 2012).

A number of philosophy-relevant studies have been conducted among teachers, prospective teachers and administrators. These researches can be examined under two categories as scale development-adaptation studies (Semerci et al., 2002; Yılmaz et al., 2011), and determining philosophical tendencies with respect to several variables (Doğanay and Sarı, 2003; Ekiz, 2005; Fung, 2005;Ekiz, 2007; Çoban, 2002; Kaya, 2007;Duman and Ulubey, 2008; Duman, 2008;Tekin and Üstün, 2008; Üstüner, 2008; Karadağ et al., 2009; Doğanay, 2011;Yılmaz et al., 2012; Biçer et al., 2013; Yapıcı, 2013; Alkın et al., 2014).

As researches on teaching-learning approaches are grouped in terms of their similarities, it is witnessed that studies conducted by Aypay (2011) were performed for scale development and adaptation; studies conducted by Chan (2003), Chan and Elliott (2004), Rıdriguez (2007), Taşkın (2012), Aypay (2011), Ozan and Çiftçi (2013), Ünal and Ergin (2006), Baş (2014) were performed for detecting teaching-learning approaches and examining with respect to several variables.

Despite the general tendency in literature that teachers' educational approaches are constructed on the basis of relevant educational philosophy (Austin and Reinhardt, 1999; Elisasser, 2008; Karakuş, 2006), no research focusing on the relation between the two variables was detected in literature review. Within this framework it is deemed necessary to define the relationship between prospective teachers' educational philosophy and teaching-learning approach. Present research holds importance in submitting data on identifying prospective teachers as the teachers of future, philosophical tendencies and the kind of teaching approach they follow in line with their adopted perspective.

The purpose of this research is to analyze the relationship between prospective teachers' educational philosophies and their teaching-learning approaches. Within this framework, answers are sought for the questions as follows.

1. What is the educational philosophy and teaching-learning approach adopted by prospective teachers?
2. Does the educational philosophy and teaching-learning approach adopted by prospective teachers vary with respect to their,
a) gender,
b) departments they study in?

3. Is there a relation between prospective teachers' educational philosophy and their teaching-learning approach?

METHOD

In this study conducted to illustrate the interrelation between prospective teachers' educational philosophies and their teaching-learning approaches, relational screening model has been utilized. Relational screening model is a research model used to detect the presence and/or level of covariance between two or multiple variances (Karasar, 2004).

Study group

Study group consists of 542 prospective teachers having received pedagogical formation in Balıkesir University Necatibey Faculty of Education Department between 2013-2014 academic years. Data were collected from 382 prospective teachers, 54; misfilled forms were excluded from the research, hence the research was completed with the data collected from 328 prospective teachers.

Of the prospective teachers constituting study group, 67% were females (n=220) and 33% were males (n=108). As the participants were examined as per their department; participants from science-mathematics department constituted 43% of the group (n=142), and participants from social sciences department constituted 57% of the group (n=186).

Data collection tools

Detection Scale of Educational Philosophy: In detecting educational philosophy of prospective teachers, "Detection Scale of Educational Philosophy" developed by Semerci et al. (2002) was employed. The scale consists of 47 items graded as "I totally disagree: 1", "I partially agree: 2", "I am undecided: 3", "I agree mostly: 4"and "I totally agree: 5" in 5- Likert type. Of this scale with four-factor structure, perennialism dimension consists of 10 items, essentialism dimension consists of 12 items, progressivism dimension consists of13 items and re-constructionism dimension consists of 12 items. Cronbach alpha general internal consistency coefficient of the scale was measured as .73, for perennialism dimension as .65, for essentialism dimension as.68, for progressivism dimension as.85 and re-constructionism dimension as.77 (Semerci et al., 2002). Exploratory factor analysis was reapplied in the scale. A 4 dimension scale was similar to the original form of the scale. In the reliability analysis Cronbach Alpha reliability coefficient was calculated for the whole scale as .72, for perennialism dimension as .63, for essentialism dimension as .66, for progressivism dimension as.75 and re-constructionism dimension as.74.

Scale of Teaching and Learning Approaches: In detecting prospective teachers' teaching-learning approaches, Scale of Teaching and Learning Approaches adapted into Turkish by Aypay (2011) from its originally English form developed by Chan and Eliot was used. The validity and reliability of the scale was verified on prospective teachers. The scale consisted of 30 items in 5-Likert type listed as (5=I totally agree – 1=I totally disagree).Constructivist approach dimension of this two-factor scale consisted of12 items and its traditional approach dimension consisted of 18 items. For the whole of the 30 –item scale form and sub-factors of constructivist approach hand traditional approach, Cronbach Alpha reliability coefficient values were respectively measured as.86 and .84 (Aypay, 2011). Exploratory factor analysis was reapplied to the scale. A 2 dimension scale was observed similar to the the original form of the scale. In the reliability analysis Cronbach Alpha reliability coefficient was calculated for whole scale as .70, and for

Table 1. Level of educational philosophy and teaching-learning approaches.

	N	$\overline{X}$	SD
Educational Teaching Philosophy			
Perennialism	328	2.73	.39
Essentialism	328	2.51	.48
Progressivism	328	4.46	.38
Re-constructionism	328	3,85	.44
Teaching Learning Approaches			
Constructivist	328	4.28	.37
Traditional	328	2.68	.48

both sub dimensions as .76.

Findings of present research evidence that data collection scales maintained their dimension and factor structures and their reliabilities remained close to the values in the original forms.

Data analysis

In the analysis of research data arithmetic mean, t-test and Pearson correlation coefficient were used. Statistical significance of collected data was evaluated in levels .01 and .05. In this research, the restrictions of 5-Likert scale were taken as the base since the scales used in detecting prospective teachers' educational philosophy and teaching-learning approaches were Likert type. In relation analyses total arithmetic mean was employed.

FINDINGS

Table 1 demonstrates the findings on prospective teachers' educational philosophy and teaching-learning approaches.

Table 1 reveals that prospective teachers most frequently adopt progressivism educational philosophy (n=328; $\overline{X}$=4.46; sd= .38) which is followed respectively by re-constructionism (n=328; $\overline{X}$=3.85; sd= .44), perennialism (n=328; $\overline{X}$=2.73; sd= .39) and essentialism (n=328; $\overline{X}$=2.51; sd=.48) philosophies. As the findings are examined with respect to teaching-learning approaches it is detected that most frequently adopted approach by prospective teachers is constructivist learning approach (n=328; $\overline{X}$=4.28; sd= .37) rather than traditional approach (n=328; $\overline{X}$=2.68; sd= .48). Based on the finding that prospective teachers mostly adopt progressivism and re-constructionism philosophies and corresponding constructivist learning approach, it can reasonably be suggested that they will be end up as in-service teachers who put the student into the center of learning, promote active in-class participation and realize the effect of education in social transformation.

The results of t-test comparing prospective teachers' educational philosophy and teaching-learning approaches with respect to gender are as given in Table 2.

As the findings of Table 2 displaying whether there exists a differentiation in prospective teachers' educational philosophy with respect to gender are analyzed, it is seen that in essentialism and re-constructionism philosophies there was a significant differentiation between male and female prospective teachers. Obtained findings show that male prospective teachers adopt essentialism educational philosophy more than female prospective teachers ($\overline{X}$=2.58; t= -2.111; p<.05), while female prospective teachers adopt re-constructionism educational philosophy more than males ($\overline{X}$=3.89; t=2.152; p<.05).As the findings in Table 2 are analyzed with respect to teaching-learning approaches a significant differentiation in favor of male prospective teachers was recognized in traditional teaching learning approach ($\overline{X}$=2.79; t=-2.787; p=.<.05). Driven from these findings it can be argued that gender plays a determinant role in prospective teachers' adopting essentialism and re-constructionism educational philosophy and traditional teaching-learning approach. Additionally in essentialism philosophy and corresponding traditional approach, a significant differentiation in favor of male prospective teachers was found while in re-constructionism philosophy a significant differentiation in favor of female prospective teachers was identified; hence the findings are deemed to be consistent.

The results of t-test comparing prospective teachers' educational philosophy with respect to their department are as given in Table 3.

As the findings of Table 3 displaying whether there exists a differentiation in prospective teachers' educational philosophy with respect to department are examined, it is seen that essentialism educational philosophy is adopted more widely by science-mathematics department prospective teachers ($\overline{X}$=2.61; t= 3.261; p<.01) than prospective teachers studying in social science departments. As the findings are examined with respect to teaching-learning approach, constructivist approach is adopted more widely by prospective teachers studying in social science departments ($\overline{X}$=4.32; t=-2.467; p=.<.05) than prospective teachers in science-

Table 2. t-test for differences between philosophy and learning approaches by gender.

Factors		Gender	N	$\overline{X}$	SD	t	p
Philosophy	Perennialism	Female	220	2.70	.40	-1,640	.102
		Male	108	2.78	.35		
	Essentialism	Female	220	2.47	.51	-2,111	.036*
		Male	108	2.58	.41		
	Progressivism	Female	220	4.48	.36	1,422	.156
		Male	108	4.41	.40		
	Re-constructionism	Female	220	3.89	.41	2,152	.033*
		Male	108	3.77	.49		
Approach	Constructivist	Female	220	4.30	.37	1,704	.089
		Male	108	4.23	.36		
	Traditional	Female	220	2.63	.46	-2,787	.006**
		Male	108	2.79	.50		

p<.01** p<.05*.

Table 3. t-test for differences between philosophy and teaching-learning approaches by department.

Factors		Department	N	$\overline{X}$	SD	t	p
Philosophy	Perennialism	Science-Mathematics	142	2.75	.42	.908	.365
		Social	186	2.71	.36		
	Essentialism	Science-Mathematics	142	2.61	.46	3.261	.001**
		Social	186	2.43	.48		
	Progressivism	Science-Mathematics	142	4.46	.32	. 320	.749
		Social	186	4.45	.41		
	Re-constructionism	Science-Mathematics	142	3.81	.42	-1.517	.130
		Social	186	3.88	.46		
Approach	Constructivist	Science-Mathematics	142	4.22	,27	-2.467	.014*
		Social	186	4.32	.36		
	Traditional	Science-Mathematics	142	2.80	.37	3.840	.000**
		Social	186	2.59	.52		

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

mathematics department while traditional approach is adopted more widely by science-mathematics prospective teachers ($\overline{X}$=2.80; t=3.840; p=.<.01) than prospective teachers studying in social science departments. This difference might be related to the nature of science-mathematics department (knowledge-centeredness, eternally valid basic principles, fixed formulas) which might have affected prospective teachers in science-mathematics department. The findings can be interpreted such that department plays a determinant role in the views of prospective teachers toward essentialism philosophy and teaching-learning approach. In the same breath it is possible to claim that prospective teachers' department might have rendered a consistent impact on their philosophy and individualized teaching-learning approach.

In detecting whether there exists a correlation between prospective teachers' adopted educational philosophy and their teaching-learning approach, Pearson correlation coefficient was utilized and obtained findings are as illustrated in Table 4.

Table 4 evidences that a positive-way significant relation exits between the generally adopted educational philosophy and teaching-learning approach(r=.39; p<.01). It has been concluded that there is a positive significant relation between "perennialism" (r=.35; p<.01) and "essentialism"(r=.31; p<.01) educational philosophies and "traditional" teaching-learning approach. In the same manner it has been identified that a positive significant relation exists between "progressivism" (r=.35; p<.01) and "re-constructionism" (r=.44; p<.01) educational philosophies and "constructivist" teaching-learning

Table 4. Correlations between educational philosophy and teaching-learning approaches.

Factors	Constructivist	Traditional	Teaching-learning Approach
Perennialism	-.00	.35[**]	.34[**]
Essentialism	-.05	.31[**]	.37[**]
Progressivism	.35[**]	-.04	.12[**]
Re-constructionism	.44[**]	.03	.25[**]
Educational philosophy	.30[**]	.25[**]	.39[**]

N=328 p<.01**.

approach. Based on these findings it can reasonably be claimed that prospective teachers having adopted perennialism and essentialism philosophy are more inclined toward traditional approach whilst prospective teachers having adopted progressivism and re-constructionism educational philosophy are further oriented toward constructivist approach.

DISCUSSION AND CONCLUSION

At the end of this research aimed at defining the relationship between prospective teachers' educational philosophy and their teaching-learning approach, it has been concluded that prospective teachers adopt progressivism and re-constructionism philosophies more than perennialism and essentialism philosophies. Relevant literature studies manifest data that are consistent with our findings. In a research concocted by Ekiz (2005) it was concluded that prospective teachers favor more eagerly progressivism and re-constructionism educational philosophies. In a different study by Ekiz (2007) it was also detected that prospective teachers entertained negative views toward perennialism and essentialism but positive views toward progressivism and re-constructionism philosophies. In Alkın et al. (2014)'s co-research, the findings manifested that prospective teachers strongly favor modern educational philosophies (progressivism and re-constructionism), whereas less favor traditional educational philosophies (perennialism and essentialism). Parallel findings were gathered from the studied conducted by Yılmaz et al. (2012) and also Biçer et al. (2013); hence it was concluded that prospective teachers most frequently adopt progressivism, and essentialism philosophy the least frequently. Another finding reached via similar studies is that prospective teachers' view on education is not cumulatively clustered around one single philosophical view (Tekin and Üstün, 2008). Analyzed researches proved that some teachers adopted traditional educational philosophies whereas some favored modern educational philosophies (Ekiz, 2007; Duman and Ulubey, 2008; Tekin and Üstün, 2008). Each teacher could adopt one single educational philosophy or more than one educational philosophy (Doğanay and Sarı, 2003). In the same breath with this finding present study also detected that although the

most favored philosophies are progressivism and re-constructionism, there is not one single philosophy that prospective teachers focus on uniformly. Still as the more favored ones, perennialism and essentialism philosophies can be interpreted as an indicator of the consistency with the results in relevant literature.

Another finding of present research is that prospective teachers adopted constructivist approach more than traditional approach. A parallel research was put forth in Aypay's (2011) study too and it was concluded that prospective teachers adopted constructivist approach rather than traditional approach in their teaching-learning process. Chan and Elliot (2004) in their research covering prospective teachers in Hong Kong attained that prospective teachers did not visibly favor either constructivist or traditional approach. In a different study by Cheng et al. (2009) among prospective teachers from Hong Kong once more, it was concluded that prospective teachers largely adopted constructivist approach.

In current study undermining the relation between educational philosophies and teaching-learning approaches of prospective teachers receiving pedagogical formation, a set of variables were also examined to detect the possibility of differentiation in prospective teachers' views.

Research findings revealed that compared to females, male prospective teachers favored essentialism educational philosophy more widely while female prospective teachers adopted re-constructionism educational philosophy more than males. Parallel to these findings, Biçer et al. (2013) in their study detected that compared to female prospective teachers, male prospective teachers adopted essentialism philosophy more. Similar findings were obtained from the studies conducted by Doğanay and Sarı (2003) and Duman and Ulubey (2008) and it was manifested that male prospective teachers received higher scores in perennialism dimension. Another study pointed out that male prospective teachers placed more value on religious, moral and cultural aspects (perennialism-essentialism), while prospective teachers were mostly in favor of student-centered education (progressivism-re-constructionism) (Yapıcı, 2013).

In this study it was also detected that there was a significant differentiation in favor of male prospective teachers in traditional teaching-learning approach. This finding draws parallelism with Baş's (2014) research

examining elementary education teachers' teaching-learning approaches with respect to a set of criteria. Likewise Aypay's (2011) research also illustrated that female prospective teachers' constructivist scores were higher than male prospective teachers' scores and male prospective teachers' traditional scores were above female prospective teachers' scores. Rodriguez and Cano (2007) in their study covering college students identified that constructivist learning scores were higher than traditional learning scores. Two parallel studies on prospective teachers from Hong Kong (Chan and Eliot, 2004; Cheng et al., 2009) provided conflicting results concerning prospective teachers' adoption of constructivist or traditional approach. In the first research (Chan and Eliot, 2004) it was concluded that prospective teachers did not openly favor constructivist or traditional approach but in the second research (Cheng et al., 2009) it was identified that prospective teachers widely adopted constructivist approach.

In the research, it was seen that essentialism educational philosophy was adopted by science-mathematics prospective teachers rather than social sciences prospective teachers. Parallel outputs were received in Ekiz's (2007) research too. He detected that as regards prospective teachers' views on perennialism movement, prospective teachers in Mathematics Teaching department, in comparison to prospective teachers in Social Sciences Teaching department, expressed more positive statements. The difference in the nature and structure of the knowledge in both fields may account for the reason why constructivist approach is adopted by social sciences prospective teachers while traditional approach is adopted by prospective teachers in the departments of science – mathematics.

Research findings manifested that in general sense there exists positive –way significant relation between educational philosophies and teaching-learning approaches. In particular sense however there are positive –way significant relations among "perennialism" and "essentialism" educational philosophies and "traditional" teaching learning approach; also between "progressivism" and "re-constructionism" educational philosophies and "constructivist" teaching-learning approach.To put this differently, it was concluded that constructivist approach adopted progressivism and re-constructionism philosophy but traditional approach was based on perennialism and essentialism philosophy. It is concluded that this finding is consistent with theoretical frame structured on the foundation of learning approaches and the underlying philosophies (Clements and Battista, 1990; Selley, 1999; Yurdakul, 2005; Demirel, 2008; Schunk, 2009; Akınoğlu, 2014; Şahan, 2014). Ekiz (2005) identified that a positive relation exists between prospective teachers' philosophical views and inclinations. Taşkın (2012) also confirms that there is a connection between adopted educational beliefs and learning approaches. These findings draw parallelism with the research findings of Chan (2003).

Researchers demonstrated that constructivist approach can ensure making sense of the knowledge and an effective learning (Entwisle and Ramsden, 1983; Önder and Beşoluk, 2010). Based on this assertion it is feasible to argue that adopting constructivist learning approach is likely to boost the quality of teachers' learning outputs (Tekin and Üstün, 2008).

Founded on the finding that prospective teachers in general adopt progressivism and re-constructionism philosophies and the corresponding constructivist approach, it is reasonable to argue that they will rise as teachers of the future practicing learner-centered methods, promoting students' engagement in class activities and recognizing the gravity of education in the process of social transformation.

A faster and more effective fulfillment of this expectation can be achieved by enabling prospective teachers to familiarize with all educational philosophies to construct their personal philosophy upon grasping and construing all educational philosophies. Integrating educational philosophy course into pre-service teacher training programs might contribute to raising prospective teachers more qualified in this field. To assist the prospective teachers having adopted modern educational philosophies and approaches in putting their approach into practice while in class, it is a necessity to create favorable conditions in school and classrooms.

This study could be repeated within a study group consisting of prospective teachers in the Faculty of Education and prospective teachers receiving pedagogical formation in the same faculty. In that way it can be feasible to detect if a significant differentiation exists between the educational philosophies and teaching–learning approaches of prospective teachers from dissimilar teacher training sources. Parallel studies could be conducted among in-service teachers likewise, hence it could be possible to measure the impact of teachers' educational philosophy and teaching approaches in their teaching-learning activities. The same research, by employing a longitudinal approach, could be reiterated with the same groups in $1^{st} – 4^{th}$ grade process to better designate the effects of teacher training process on the philosophical views of prospective teachers.

Conflict of Interests

The author(s) have not declared any conflict of interests.

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