

The Relationship between the Educational Beliefs and Learning Approaches

Senar Alkin-Sahin

*Dumlupinar University, Faculty of Education, Kutahya, Turkey
E-mail: senar35@gmail.com*

KEYWORDS Educational Beliefs. Educational Philosophy. Learning Approaches. Pre-service Teacher

ABSTRACT The aim of this study was to determine the predictive relationships between the educational beliefs and learning approaches of the Pedagogical Formation Program Students. In addition, the study investigated the pre-service teachers' educational beliefs and learning approaches in relation to some variables. The research scope of the study was designed in line with the relational survey model consisting of 165 pre-service teachers. As data collection instruments, the Educational Beliefs Scale and Revised Two-Factor Study Process Questionnaire were used. The analysis of the collected data employed the t-test, Mann-Whitney U Test, ANOVA, Kruskal-Wallis H test, and Multiple Regression Analysis. The results of the study revealed that the pre-service teachers' educational beliefs and learning approach differ significantly depending on some variables. The educational philosophy adopted by the pre-service teachers account for about one-fifth of both deep learning total variance and surface learning total variance.

INTRODUCTION

Due to rapidly growing volume of information, the desired characteristics of students change, which then precipitate a change in the roles and responsibilities assigned to the teachers. Teacher characteristics are directly linked to the education of students who can think reasonably, access necessary information, use this information to solve problems and produce new information, question the value of this information, learn effectively, and make the learned information permanent. One of the discriminating characteristics of the teacher who can cater to the needs of this student profile is their belief in the premises and principles of contemporary educational philosophies. Moreover, teachers are expected to encourage students to actively participate in the learning-teaching process, make use of teaching methods, techniques, and materials that render students active, and conduct evaluations requiring knowledge and thinking, and in this way, become a role model for students with their own learning approaches. The present study investigated the relationship be-

tween the pre-service teachers' educational beliefs and learning approaches.

"Educational beliefs" are considered to be an individual's learning and teaching-related philosophy, assumptions, principles, and opinions (Haney et al. 2003). These educational beliefs are thought to affect the teachers' perceptions, teaching programs, and decisions related to the implementation of instruction, and consequently, their in-class behaviors and applications. As noted in the literature, the determiner of educational beliefs is "educational philosophy" (Fang 1996; Woolfolk-Hoy and Murphy 2001; Rideout 2006; Seshadri 2008; Yilmaz et al. 2011). This educational philosophy sheds light on the goal of education, the roles of students and teachers, and the nature of the content, learning-teaching process, and assessment.

The educational philosophies that determine educational beliefs are perennialism, essentialism, progressivism, re-constructionism, and existentialism. Among these movements, the traditional ideas argue that the individual is born without possessing any knowledge, the individual should be educated according to ethical values present in the past, in the present, and universal principles, the teacher should be completely dominant in education, and the main goal of the teacher as a conveyor of information should be to lead the individual to absolute truth and make students compliant with the society and universal facts. Contemporary education philosophies,

Address for correspondence:
Dr. Senar Alkin-Sahin
Dumlupinar Universitesi,
Egitim Fakultesi, Kutahya-Turkiye
Telephone: +90 (274) 265 20 31
Fax: +90 (274) 265 20 13
E-mail: senar35@gmail.com

on the other hand, contend that everything is in a state of constant change, there are no universal and unchanging facts, the individual should acquire information by means of experiences resulting from interactions with the environment, learning should focus on the interests of children, students should be active and the teacher should assume the role of a guide, and the main purpose of education should be to ensure peace and happiness of people and to foster democratic living patterns (Gutek 1997; Sonmez 2005; Moss and Lee 2010).

“Learning approaches” is one of the concepts used to explain understandings and presumptions of educational philosophies related to learning in educational psychology. Conducting research on effective learning, Ramsden (2003) defined learning approaches as the relationship between the individual and the information gained. In literature, there are two main approaches, called deep and surface, which are emphasized in relation to learning approaches of individuals (Marton and Saljo 1976, cited in Entwistle et al. 2002; Chan 2003).

The deep learning approach is associated with constructivist philosophy. An individual taking a deep learning approach critically questions any new phenomenon, state, or idea, compares it with prior information, relates new information to prior information, and establishes links between different issues. For learning to occur in the deep approach, sense-making and association are needed because it is essential that individuals acquire information through reasoning. The surface learning approach, on the other hand, is associated with traditional learning approaches. An individual taking a surface learning approach encodes and memorizes the information viewed as absolute and unchanging as parts separate from each other (Biggs 1999; Dart et al. 2000; Chan 2003; Ramsden 2003).

Thus, it is expected that there is a relationship between individuals’ state of preferences for education philosophies supporting different principles related to learning and their learning approaches. Educational philosophy is expected to be influential on learning approaches and to explain learning approaches. The present study was constructed to test this hypothesis derived from the literature.

An analysis of the literature provides various studies looking at the relationship of students, teachers, and pre-service teachers’ edu-

cational beliefs (Tondeur et al. 2008; Alkin-Sahin et al. 2014; Ilgaz et al. 2013; Tunca et al. 2014; Beytekin and Kadi 2015) and learning approaches (Chan 2003; Chan and Elliott 2004; Mayya et al. 2004; Besoluk and Onder 2010; Topkaya et al. 2011; Ismail et al. 2013; Batdal Karaduman et al. 2015; Colak 2015; Kanadli and Akbas 2015) with different variables. Yet, no paper dealing with the relationship between pre-service teachers’ educational beliefs and learning approaches was found in the literature.

Purpose of the Study

The main purpose of the present study was to analyze the relationships between the pre-service teachers’ educational beliefs and learning approaches. For this purpose, the following questions were investigated:

1. What are the opinions of pre-service teachers about their educational beliefs and learning approaches?
2. Do pre-service teachers’ educational beliefs and learning approaches vary significantly depending on variables of gender, graduation grade point average, how many books they read each month, and the type of high school from which they graduated?
3. What is the extent to which pre-service teachers’ educational beliefs predict their learning approaches?

METHODOLOGY

Research Design

The present study was designed based on a relational survey model. Within the framework of the study, this research attempted to identify and describe the relationship between the pre-service teachers’ educational beliefs and learning approaches.

The Universe of the Study

The universe of the study consisted of 250 pre-service teachers attending the pedagogical formation program at the Education Faculty of Dumlupinar University in the 2013-2014 academic year. Incomplete or imprecise data collection instruments were discarded and analyses were conducted on 165 participants. Of the participants, 27.3 percent (n=45) were male and 72.7

percent (n=120) were female. The grade point average for 66.7 percent of the pre-service teachers was between 2 and 2.99 (n=110), while 33.3 percent had a grade point average ranging from 3 to 4 (n=55). Of the participants, 44.2 percent (n=73) were the graduates of general high schools, 26.1 percent (n=43) were graduates of Anatolian high schools, and 26.1 percent (n=43) were graduates of foreign language intensive high schools. Of the participants, 12.1 percent (n=20) stated that they read one book per week, 28.5 percent (n=47) read one book every two weeks, and 55.8 percent (n=92) read one book per month.

Data Collection Instruments

The current study collected data using the "Educational Beliefs Scale (EBS)" developed by Yilmaz et al. (2011) and the "Revised Two-Factor Study Process Questionnaire (R-SPQ-2F)" developed by Biggs et al. (2001) and adapted to Turkish by Onder and Besoluk (2010).

The EBS is made of 40 items used to determine the educational beliefs of pre-service teachers and includes five subscales: the philosophies of perennialism, essentialism, progressivism, re-constructionism, and existentialism. Not a single total score is obtained from the scale. Exploratory factor analysis revealed that the total variance explained by the five subscales is about fifty percent. The Cronbach-Alpha Internal Consistency Coefficients of the subscales of EBS are as follows: progressivism $\alpha=0.91$, existentialism $\alpha=0.89$, re-constructionism $\alpha=0.81$, perennialism $\alpha=0.70$, and essentialism $\alpha=0.70$. Confirmatory factor analysis was administered to the 40-item structure subsumed under five factors as a result of exploratory factor analysis. The chi-square value suitable for the model constructed with confirmatory factor analysis for the scale was found to be significant ($\chi^2/sd=2.23$). Moreover, the other fit indices related to the model (GFI=0.85, AGFI=0.83, RMSRd \leq 0.05, RMSEA \leq 0.05, RMR and SRMRd \geq 0.08, CFI \leq 0.95, NFI and NNFI \geq 0.95, and PGFI=0.75) show that the proposed model is suitable (Yilmaz et al. 2011).

The adapted form of the R-SPQ-2F questionnaire consists of 20 items and 2 factors, the deep learning approach (DLA) and the surface learning approach (SLA). The total variance explained by the scale is 34.81 percent. The Cronbach-Alpha Internal Consistency Coefficients of the scale are as follows: DLA $\alpha=0.78$ and SLA $\alpha=0.74$. As

a result of confirmatory factor analysis administered to the two-factor structure of the scale's R-SPQ-2F, the chi-square (χ^2) value suitable for the model constructed for the scale was found to be significant, $\chi^2=487.95$ (sd=166), $p<.01$. The other fit indices related to the model are as follows: (χ^2/sd)=2.94, RMSEA=.061, NFI=.90, CFI=.93, IFI=.93, RFI=.88, GFI=.92, AGFI=.89 and SRMR=.065 (Onder and Besoluk 2010).

Data Analysis

The pre-service teachers' responses to the EBS and R-SPQ-2F were evaluated through descriptive statistics. For comparisons based on different variables, first, means, and standard deviations of the responses given by the pre-service teachers to the scales were calculated in relation to each variable, and then the normality and homogeneity of the variances were checked. Next, the data was analyzed with the Mann-Whitney U Test, independent samples t-test, one-way variance analysis (ANOVA), and Kruskal-Wallis H test. A Pearson correlation analysis was used to determine the relationships between two variables and a multiple regression analysis was used to determine predictive relationships.

FINDINGS

This section considers the pre-service teachers' opinions about their educational beliefs and learning methods, presents comparisons of their educational beliefs and learning approaches in relation to the variables of gender, graduation grade point average, the number of books they read each month, and the type of high school from which they graduated, and finally discusses the extent to which educational beliefs predict learning approaches. Table 1 shows descriptive statistics related to the pre-service teachers' educational beliefs and learning approaches.

As shown in Table 1, the pre-service teachers' support for different educational philosophies can be presented in order of importance as follows: existentialism ($X=4.50$), progressivism ($X=4.32$), re-constructionism ($X=3.93$), perennialism ($X=3.77$), and essentialism ($X=2.45$). The pre-service teachers' deep learning approach mean score ($X=3.55$) is higher than their surface learning approach mean score ($X=2.56$).

Table 1: The pre-service teachers' educational beliefs and learning approaches

| Scale | Sub-scale | N | K (number of items) | The lowest score | The highest score | X | S | X/K |
|----------|--------------------|-----|---------------------|------------------|-------------------|-------|------|------|
| EBS | Progressivism | 165 | 13 | 36.13 | 65 | 56.14 | 4.84 | 4.32 |
| | Re-constructionism | 165 | 7 | 18 | 35 | 27.52 | 3.16 | 3.93 |
| | Existentialism | 165 | 7 | 15 | 35 | 31.49 | 3.04 | 4.50 |
| | Essentialism | 165 | 5 | 5 | 20 | 12.25 | 3.01 | 2.45 |
| | Perennialism | 165 | 8 | 20 | 38 | 30.19 | 3.83 | 3.77 |
| R-SPQ-2F | Deep learning | 165 | 10 | 14 | 46 | 35.52 | 4.34 | 3.55 |
| | Surface learning | 165 | 10 | 12 | 43 | 25.56 | 5.48 | 2.56 |

The other purpose of the study was to determine whether the pre-service teachers' educational beliefs and learning approaches varied significantly based on some variables. The pre-service teachers' educational beliefs only showed significant variations based on gender in the existentialism dimension [U=2137.50, p<.05]. When mean ranks were considered, the females' belief in existentialist educational philosophy was shown to be stronger, although there is no gender-based significant difference in the other sub-dimensions: progressivism [U=2289, p>.05], re-constructionism [U=2416, p>.05], perennialism [U=2334, p>.05], and essentialism [U=2223.50, p>.05].

The pre-service teachers' educational beliefs do not significantly vary depending on graduation grade point average, the number of books they read, or the type of high school from which they graduated. For the graduation grade point average variable, the values were: Existentialism [$t_{(163)}=1.73$; p>.05], progressivism [$t_{(163)}=1.31$; p>.05], re-constructionism [$t_{(163)}=2.23$; p>.05], perennialism [$t_{(163)}=0.94$; p>.05], and essentialism [$t_{(163)}=1.32$; p>.05]. Regarding the number of books they read, the values were: Existentialism [$\chi^2_{(2)}=2.14$; p>.05], progressivism [$\chi^2_{(2)}=3.64$; p>.05], re-constructionism [$\chi^2_{(2)}=2.88$; p>.05], perennialism [$\chi^2_{(2)}=5.07$; p>.05], and essentialism: [$\chi^2_{(2)}=0.24$; p>.05]. For the variable related to the type of high school from which they graduated, the values were: Existentialism [$F_{(2)}=0.86$; p>.05], progressivism [$F_{(2)}=0.34$; p>.05], re-constructionism [$F_{(2)}=0.66$; p>.05], perennialism [$F_{(2)}=0.53$; p>.05], and essentialism [$F_{(2)}=1.79$; p>.05].

The pre-service teachers' learning approaches did not vary significantly depending on the variables of gender, graduation grade point average and the type of high school from which they graduated. For the gender variable, the results of deep learning were [U=2555, p>.05] and surface learning were [U=2458, p>.05]. For the

graduation grade point average variable, the results of deep learning were [$t_{(163)}=2.86$; p>.05] and surface learning were [$t_{(163)}=0.93$; p>.05]. Regarding the type of high school from which they graduated, the results of deep learning were [$F_{(2)}=0.15$; p>.05] and surface learning were [$F_{(2)}=0.57$; p>.05]. On the other hand, the pre-service teachers' deep learning approach varied significantly depending on the number of books they read each month [$\chi^2_{(2)}=11.85$; p<.05]. When the mean ranks are considered, it is clear that a pre-service teacher who reads a book per week possesses a higher level of deep learning than pre-service teachers who reported taking two weeks or longer to read a book. However, the pre-service teachers' surface learning approaches do not significantly vary depending on the state of reading book [$\chi^2_{(2)}=4.61$; p>.05].

The final purpose of the current study was to determine the extent to which the pre-service teachers' educational beliefs predict their learning approaches. For this purpose, a multiple regression analysis was conducted and the results of the analysis are presented in Tables 2 and 3.

Table 2 presents the binary and partial correlations between the educational philosophies of pre-service teachers (predicting variable) and their deep learning approach (predicted variable). There is a positive, medium-level correlation between a deep learning approach and progressivism (r=0.36) and re-constructionism (r=0.32), and there is a positive, low-level correlation between a deep learning approach and existentialism (r=0.28). However, when the other variables are controlled, there is no relationship between a deep learning approach and the other educational philosophies apart from progressivism and re-constructionism. When the other variables are controlled, there is a positive, low-level correlation between progressivism (r=0.18) and re-constructivism (r=0.19) and a deep learning approach. Altogether, the educational philosophies

Table 2: Regression analysis results related to prediction of the pre-service teachers' deep learning approach

| Variable | B | Standard error | \hat{a} | T | p | Binary r | Partial r |
|--------------------|--------|----------------|-----------|------|------|----------|-----------|
| Constant | 13.708 | 4.65 | - | 2.95 | 0.00 | - | - |
| Perennialism | 0.098 | 0.09 | 0.087 | 1.04 | 0.30 | 0.14 | 0.08 |
| Essentialism | -0.096 | 0.12 | -0.067 | 0.78 | 0.43 | -0.10 | -0.06 |
| Progressivism | 0.220 | 0.10 | 0.245 | 2.25 | 0.02 | 0.36 | 0.18 |
| Re-constructionism | 0.274 | 0.11 | 0.199 | 2.43 | 0.01 | 0.32 | 0.19 |
| Existentialism | 0.004 | 0.15 | 0.003 | 0.03 | 0.97 | 0.28 | 0.01 |

R=0.41 R²=0.17
 F₍₅₋₁₅₉₎=6.59, p= 0.00

of the pre-service teachers display a significant, medium-level correlation with deep learning approach scores (R=0.41, p<0.01). The educational philosophies of these pre-service teachers accounted for seventeen percent of the total variance in the deep learning approach. According to the standardized regression coefficient (β), the degree of influence, from most to least influential, of the educational philosophies on a deep learning approach is progressivism, re-constructionism, perennialism, essentialism, and existentialism. t-test results concerning the significance of regression coefficients demonstrate that only progressivism and re-constructivism are predictors of pre-service teachers' deep learning approach. The other educational philosophies do not have a significant influence on the deep learning approach. In light of these findings, the deep learning regression equation can be written as follows:

$$\text{Deep Learning} = 13.708 + 0.098 \text{ Perennialism} - 0.096 \text{ Essentialism} + 0.220 \text{ Progressivism} + 0.274 \text{ Re-constructionism} + 0.004 \text{ Existentialism}$$

Table 3 presents the binary and partial correlations between the educational philosophies of the pre-service teachers (predicting variable) and

their surface learning approach (predicted variable). There is a positive, low-level correlation between a surface learning approach and perennialism (r=0.25) and essentialism (r=0.28), and there is a negative, low-level correlation between a surface learning approach and progressivism (r=-0.21), re-constructionism (r=-0.26), and existentialism (r=-0.22). However, when the other variables are controlled, there is no relationship between surface learning approach and the other educational philosophies except for perennialism and re-constructionism. When the other variables are controlled, there is a positive, low-level correlation between a surface learning approach and perennialism (r=0.27), and there is a negative, low-level correlation between surface learning and re-constructionism (r=-0.27). Altogether, the educational philosophies of the pre-service teachers have a significant, medium-level correlation with surface learning approach scores (R=0.46, p<0.01). The educational philosophies of the pre-service teachers account for twenty-one percent of the total variance in the surface learning approach. According to the standardized regression coefficient (β), the degree of influence, from most to least influential,

Table 3: Regression analysis results related to prediction of the pre-service teachers' surface learning approach

| Variable | B | Standard error | \hat{a} | T | p | Binary r | Partial r |
|--------------------|--------|----------------|-----------|------|------|----------|-----------|
| Constant | 30.753 | 5.72 | - | 5.37 | 0.00 | - | - |
| Perennialism | 0.403 | 0.11 | 0.282 | 3.47 | 0.00 | 0.25 | 0.27 |
| Essentialism | 0.271 | 0.15 | 0.149 | 1.78 | 0.07 | 0.28 | 0.14 |
| Progressivism | 0.027 | 0.12 | 0.024 | 0.22 | 0.82 | -0.21 | 0.02 |
| Re-constructionism | -0.491 | 0.13 | -0.283 | 3.54 | 0.00 | -0.26 | -0.27 |
| Existentialism | -0.277 | 0.18 | 0.153 | 1.49 | 0.14 | -0.22 | -0.12 |

R=0.46 R²=0.21
 F₍₅₋₁₅₉₎=8.59, p= 0.00

of the educational philosophies on a surface learning approach is: re-constructionism, perennialism, existentialism, essentialism, and progressivism. The t-test results concerning the significance of regression coefficients demonstrate that only perennialism and re-constructionism are predictors of pre-service teachers' surface learning approach. The other educational philosophies do not have a significant influence on a surface learning approach. In light of these findings, the surface learning regression equation can be written as follows:

$$\text{Surface Learning} = 30.753 + 0.403 \text{ Perennialism} + 0.271 \text{ Essentialism} + 0.027 \text{ Progressivism} - 0.491 \text{ Re-constructionism} - 0.277 \text{ Existentialism}$$

DISCUSSION

The purpose of the present study was to investigate the predictive relationships between the educational beliefs and learning approaches of the pre-service teachers attending a formation program. First, the pre-service teachers' educational beliefs and learning approaches were explored. The pre-service teachers' support for their educational beliefs can be presented in the following order of importance: existentialism, progressivism, re-constructionism, perennialism and essentialism. It seems that much research in the literature supports this finding (Ilgaz et al. 2013; Alkin-Sahin et al. 2014; Tunca et al. 2014). The pre-service teachers' deep learning scores were found to be higher than their surface learning scores. When individuals with a high deep learning score learn effectively, make research to understand the issues, create connections between new content and prior knowledge, and critically question their knowledge (Enwistle and Ramsden 1983; Beattie et al. 1997), the relevant finding can be interpreted as positive. Other research employing different measurement tools has revealed that pre-service teachers adopt deep learning more than surface learning (Tural and Akdeniz 2008; Besoluk and Onder 2010; Dogan 2011; Aydiner-Uygun 2012; Kanadli and Akbas 2015).

In terms of educational beliefs, the pre-service teachers' scores only differ significantly in the existentialism dimension depending on gender favoring the female participants, and they do not vary significantly with respect to the other dimensions. Altinkurt et al. (2012) and Ilgaz et al.

(2013) concluded that the scores taken from the dimensions of educational philosophy generally do not vary significantly depending on gender. Moreover, in line with the findings of the present study, Alkin-Sahin et al. (2014) reported that the mean score of females for existentialist educational philosophy is higher than that of males. The pre-service teachers' educational beliefs do not vary significantly depending on the number of books they read each month, and this finding is contrary to the expectations of the study. It was assumed that reading books would trigger individual characteristics such as surprise, curiosity and suspicion, which help the formation of philosophical thoughts and related educational beliefs (Honer and Hunt 1996; Jaspers 1997).

The finding that the pre-service teachers' learning approaches do not vary depending on gender matches other research in the literature (Wilson et al. 1996; Chan 2003; Kek and Huijser 2009). The pre-service teachers' learning approaches do not vary significantly depending on graduation grade point average, which is contrary to expectations because studies on learning approaches have argued that high achieving students are more likely to use deep learning than their counterparts with lower academic achievements (Zeegers 2001). Studies have emphasized the close relationship between learning approaches and academic achievement, such that learning approaches affect educational outcomes, a surface learning approach is associated with low level learning outcomes and a deep learning approach is associated with high level learning outcomes (Trigwell and Prosser 1991; Gijbels et al. 2005). The pre-service teachers' learning approaches do not vary significantly depending on the type of high school from which they graduated. Besoluk and Onder (2010) and Aydiner-Uygun (2012) reported similar results. The pre-service teachers' adaptation of a deep learning approach varies significantly depending on their reading habits.

The final purpose of the study was to determine the extent to which the pre-service teachers' educational beliefs predict their learning approaches. The present study demonstrates that progressivism and re-constructionism are good predictors of a deep learning approach, and perennialism and re-constructionism are predictors of a surface learning approach. The pre-service teachers' beliefs in progressivism and re-con-

structionism strengthen the tendency to adopt a deep learning approach. On the other hand, while the pre-service teachers' belief in re-constructionism decreases their tendency to adopt a surface learning approach, their belief in perennialism fortifies this tendency to adopt the surface learning approach. Although the literature shows no concrete result related to the relationship between educational beliefs and learning approaches, different studies have reported that there are significant relationships between educational beliefs and self-efficacy perception (Ilgaz et al. 2013), critical thinking tendency (Alkin-Sahin et al. 2014), professional values (Tunca et al. 2014) and values (Beytekin and Kadi 2015), and learning approaches are significantly related to epistemological beliefs (Chan 2003; Chan and Elliott 2004; Topkaya et al. 2011; Ismail et al. 2013), self-efficacy beliefs (Topkaya et al. 2011), learning styles and critical thinking tendencies (Besoluk and Onder 2010), academic performance (Mayya et al. 2004), and self-regulated learning skills (Batdal Karaduman et al. 2015).

CONCLUSION

Pre-service teachers adopt contemporary educational philosophies more than traditional educational philosophies, and their deep learning approach scores were higher than their surface learning approach scores. The pre-service teachers' educational beliefs and learning approach differ significantly depending on some variables. There is a positive, medium-level correlation between a deep learning approach and progressivism and re-constructionism, and a positive, low-level correlation between a deep learning approach and existentialism. Altogether, the educational philosophies of the pre-service teachers show a significant, medium-level correlation with deep learning approach scores. There is a positive, low-level correlation between a surface learning approach and perennialism and essentialism, and a negative, low-level correlation between a surface learning approach and progressivism, re-constructionism, and existentialism. Altogether, the educational philosophies of the pre-service teachers show a significant, medium-level correlation with surface learning approach scores. The educational philosophy adopted by the pre-service teacher's accounts for about one-fifth of both deep learning total variance and surface learning total variance.

RECOMMENDATIONS

The predictive relationships elicited in the present study indicate that the educational philosophy adopted by the pre-service teachers affects their learning performance, learning outcomes, their ability to memorize or questioning information. Particularly in teacher training programs, pre-service teachers' awareness of educational philosophies should be raised in teaching pedagogy courses and they should be encouraged to adopt contemporary educational philosophies. Moreover, the educational philosophy should be incorporated into teacher training programs as a required course because this will help pre-service teachers reach the information related to teacher education, make use of this information to find solutions to problems and generate new information, learn effectively, and make the learned information permanent.

NOTE

The summary of this study was presented as an oral presentation at "I. Eurasian Educational Research Congress" (24-26 April 2014) held at the Istanbul University, Istanbul.

REFERENCES

- Alkin-Sahin S, Tunca N, Ulubey O 2014. The relationship between pre-service teachers' educational beliefs and their critical thinking tendencies. *Elementary Education Online*, 13(4): 1473-1492.
- Altinkurt Y, Yilmaz K, Oguz A 2012. Educational beliefs of primary and high school teachers. *On Dokuz Mayis University Journal of Faculty of Education*, 31(2): 1-19.
- Aydiner-Uygun M 2012. An analysis of music teacher candidates' learning approaches levels in piano lesson according to some variables. *e-Journal of New World Sciences Academy*, 7(4): 375-404.
- Batdal Karaduman G, Guder N, Ozsoy-Gunes Z, Kirbaslar FG 2015. Investigation of the relationship between study approaches and self-regulated learning skills of teacher candidates. *Procedia - Social and Behavioral Sciences*, 174: 251-258. doi: 10.1016/j.sbspro.2015.01.655
- Beattie V, Collins W, McInnes W 1997. Deep and surface learning: Simple or simplistic dichotomy? *Accounting Education*, 6(1): 1-12. doi: 10.1080/096392897331587.
- Besoluk S, Onder I 2010. Investigation of teacher candidates' learning approaches, learning styles and critical thinking dispositions. *Elementary Education Online*, 9(2): 679-693.
- Beytekin OF, Kadi A 2015. A study on the values and educational beliefs of student teachers. *International Journal of Social Science*, 31: 327-341.

- Biggs JB 1999. *Teaching for Quality Learning at University*. Buckingham: Open University Press.
- Chan KW, Elliott RG 2004. Epistemological beliefs across cultures: Critique and analysis of beliefs structure studies. *Educational Psychology*, 24(2): 123-142. doi: 10.1080/0144341032000160100.
- Chan KW 2003. Hong Kong teacher education students' epistemological beliefs and approaches to learning. *Research in Education*, 69(1): 36-50.
- Colak E 2015. The effect of cooperative learning on the learning approaches of students with different learning styles. *Eurasian Journal of Educational Research*, 59: 17-34.
- Dogan A 2011. Learning approaches and study habits. *Eurasian Journal of Educational Research*, 42: 39-44.
- Dart BC, Burnett PC, Purdie N, Boulton-Lewis G, Campbell J, Smith D 2000. Students' conceptions of learning, the classroom environment, and approaches to learning. *Journal of Educational Research*, 93(4): 262-270. doi:10.1080/00220670009598715.
- Entwistle NJ, Ramsden P 1983. *Understanding Student Learning*. London: Croom-Helm.
- Entwistle N, McCune V, Hounsell J 2002. Approaches to Studying and Perceptions of University Teaching-Learning Environments: Concepts, Measures and Preliminary Findings. Universities of Edinburgh, Coventry and Durham: Enhancing Teaching and Learning Environments in Undergraduate Courses Occasional Report.
- Fang ZH 1996. A review of research on teacher beliefs and practices. *Educational Research*, 38: 47-65. doi: 10.1080/0013188960380104.
- Gijbels D, Dochy F, Van den Bossche P, Segers M 2005. Effects of problem-based learning: A meta-analysis from the angle of assessment. *Review of Educational Research*, 75(1): 27-61. doi: 10.3102/00346543075001027.
- Gutok G 1997. *Egitime Felsefi ve Ideolojik Yaklasimler*. Ankara: Pegem Yayıncılık.
- Haney JJ, Lumpe AT, Czerniak CM 2003. Constructivist beliefs about the science classroom learning environment: Perspectives from teachers, administrators, parents, community members, and students. *School Science and Mathematics*, 103(8): 366-377. doi: 10.1111/j.1949-8594.2003.tb18122.x.
- Honer SM, Hunt TC 1996. *Felsefeye Cagri*. (Trans. H. Under). Ankara: Imge Kitabevi.
- Ilgaz G, Bulbul T, Cuhadar C 2013. Investigation of the relationship between pre-service teachers' educational beliefs and their perceptions of self-efficacy. *Abant Izzet Baysal University Journal of Faculty of Education*, 13(1): 50-65.
- Ismail H, Hassan A, Muhamad M, Wan Ali WZ, Konting M 2013. Epistemological belief and learning approaches of students in higher institutions of learning in Malaysia. *International Journal of Instruction*, 6(1):139.
- Jaspers K 1997. *Felsefe Nedir?* (Trans. I. Z. Eyuboglu). Istanbul: Say Yayinlari.
- Kanadli S, Akbas A 2015. The relationship between pre-services science teachers' epistemological beliefs, learning approaches and UPE Scores. *Mersin University Journal of the Faculty of Education*, 11(1): 116-131.
- Kek MYC, Huijser H 2009. What Makes a Deep and Self-directed Learner: Exploring Factors that Influence Learning Approaches and Self-directed Learning in a PBL Context at a Malaysian Private University. What are we Learning About Learning? *Proceedings of the 2nd International PBL Symposium*. Republic Polytechnic, Singapore, 10-12 June, pp. 708-716.
- Mayya SS, Rao AK, Ramnarayan K 2004. Learning approaches, learning difficulties and academic performance of undergraduate students of physiotherapy. *The Internet Journal of Allied Health Sciences and Practice*, 2(4): 1-6.
- Moss G, Lee C 2010. A critical analysis of philosophies of education and INTASC standards in teacher preparation. *International Journal of Critical Pedagogy*, 3(2): 36-46.
- Onder I, Besoluk S 2010. Adaptation of revised two factor study process questionnaire (R-SPQ-2F) to Turkish. *Education and Science*, 35(157): 55-67.
- Ramsden P 2003. *Learning to Teach in Higher Education*. London: Routledge Falmer.
- Rideout GW 2006. Educational beliefs and the learning environment. *Academic Exchange Quarterly*, 10(2): 67-71.
- Seshadri C 2008. *Philosophy of Education as a Knowledge Field*. New Delhi: National University of Educational Planning and Administration.
- Sonmez V 2005. *Egitim Felsefesi*. Ankara: Ani Yayincilik.
- Tondeur J, Hermans R, van Braak JV, Valcke M 2008. Exploring the link between teachers' educational belief profiles and different types of computer use in the classroom. *Computers in Human Behavior*, 24: 2541-2553. doi: 10.1016/j.chb.2008.02.020.
- Topkaya N, Yaka B, Ogretmen T 2011. The adaptation study of learning and studying approaches inventory and the relations with related constructs. *Education and Science*, 36(159): 192-204.
- Trigweel K, Prosser M 1991. Relating approaches to study and quality of learning outcomes at the course level. *British Journal of Educational Psychology*, 61:265-275. doi: 10.1111/j.2044-8279.1991.tb00984.x.
- Tunca N, Alkin-Sahin S, Oguz A 2014. The Relationship between the Educational Beliefs and Professional Values of Teachers. *1st Eurasian Educational Research Congress*. EJER and Istanbul Universitesi, 24 - 26 April, Istanbul.
- Tural DG, Akdeniz AR 2008. Examining learning approaches of science student teachers according to the class level and gender. *US-China Education Review*, 5(12): 54-59.
- Wilson K, Smart RM, Watson RJ 1996. Gender differences in approaches to learning in first year psychology students. *British Journal of Educational Psychology*, 22: 59-71. doi: 10.1111/j.2044-8279.1996.tb01176.x.
- Woolfolk-Hoy A, Murphy PK 2001. Teaching educational psychology to the implicit mind. In: B Torfand, R Sternberg (Eds.): *Understanding and Teaching the Intuitive Mind*. Mahwah, NY: Erlbaum, pp.145-185.
- Yilmaz K, Altinkurt Y, Cokluk O 2011. Developing the educational belief scale: The validity and reliability study. *Educational Sciences: Theory and Practice*, 11(1): 335-350.
- Zeegers P 2001. Approaches to learning in science: A longitudinal study. *British Journal of Educational Psychology*, 71(1): 115-132. doi: 10.1348/000709901158424.