EFFECTS OF EDUCATIONAL BELIEFS ON ATTITUDES TOWARDS USING COMPUTER TECHNOLOGIES

EĞİTİME YÖNELİK İNANÇLARIN BİLGİSAYAR TEKNOLOJİLERİNİ KULLANMAYA YÖNELİK TUTUMLARA ETKİSİ

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ABSTRACT: This study, aiming to determine the relationship between pre-service teachers' beliefs about education and their attitudes towards utilizing computers and internet, is a descriptive study in scanning model. The sampling of the study consisted of 270 pre-service teachers. The potential relationship between the beliefs of pre-service teachers about education and their attitudes towards using computers and internet was analyzed and the results were evaluated. The study concluded that there are positive significant relationships between pre-service teachers' beliefs about education and their attitudes towards using internet and computers. It was found that there are positive significant relations also between the progressivism, reconstructionism and existentialism sub-dimensions of the scale of beliefs about education and their attitudes towards computers. Additionally, the attitudes of pre-service teachers towards using internet and the progressivism, reconstructionism and existentialism sub-dimensions of the scale of beliefs about education were found to have positive significant relationships.

Anahtar sözcükler: educational beliefs, internet utilization, computer utilization.

ÖZET: Öğretmen adaylarının eğitime yönelik inançları ve bilgisayar-internet kullanımına yönelik tutumları arasındaki ilişkiyi incelemeyi amaçlayan bu araştırma, tarama modelinde betimsel bir araştırma niteliğindedir. Araştırmanın çalışma grubunu 270 öğretmen adayı oluşturmuştur. Öğretmen adaylarının eğitimle ilgili inançları ile bilgisayar kullanımına yönelik tutumları ve internet arasındaki potansiyel ilişki analiz edilmiş ve sonuçlar değerlendirilmiştir. Araştırmada, öğretmen adaylarının eğitime yönelik inançları ile bilgisayara ve internet kullanımına yönelik tutumları arasında anlamlı pozitif yönlü ilişkilerin bulunduğu belirlenmiştir. Ayrıca ilerlemecilik, yeniden kurmacılık ve varoluşçu eğitim alt boyutları ile öğretmen adaylarının bilgisayara yönelik tutumları arasında anlamlı pozitif yönlü ilişkilerin olduğu belirlenmiştir. Öğretmen adaylarının internet kullanımına yönelik tutumları ile ilerlemecilik, yeniden kurmacılık ve varoluşçu eğitim alt boyutları arasında anlamlı pozitif yönlü ilişkiler olduğu ortaya çıkmıştır.

Keywords: eğitim inançları, internet kullanımı, bilgisayar kullanımı.

1. INTRODUCTION

Using the scientific knowledge in determining and addressing the problems in our lives has created the knowledge society. The role of the teacher as the main actor of education and teaching has also improved since they are expected to become lifelong learners and teachers. They are required to possess and educational attitude to think critically and creatively, function high level mental activities such as problem solving and train students in the light of today's common paradigms as well as having the equivalent technological competence. In knowledge societies, teachers with knowledge literacy are required. Knowledge literacy could shortly be defined as feeling the need for knowledge, defining knowledge, acquiring knowledge and evaluating it (Kurbanoglu & Akkoyunlu, 2002). There is also an approach that defines knowledge literacy as the skills to acquire knowledge from various resources, to evaluate, organize and use it (Humes, 2003). Neely (2002) describes the required qualifications of an individual with knowledge literacy as (Doyle, 1994) recognizing knowledge fully and accurately, indicating and evaluating the need for knowledge through questions, finding the potential knowledge resources, using the computer and internet technologies. A teacher needs to have had qualified education in order to possess these characteristics. This education and training process is shaped by their beliefs. Beliefs are the strongest indicators of the behaviors and decisions of individuals all throughout their lives (Hofer & Pintrich, 1997; Pajares, 1992).

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Beyond the cognitive knowledge that individuals possess, beliefs are constructed according to how they perceive various events and experiences in terms of their own personal characteristics, education and cultural backgrounds. Beliefs are therefore extremely important to individuals and are not subject to change unless they cause incompetence. Having various effects on individuals' thoughts and behaviors, beliefs need to be considered within the education and teaching processes (Kuzgun & Deryakulu, 2004).

Especially in determining and evaluating the beliefs about some specific professions, the above-mentioned characteristics need to be considered. Beliefs about education, playing an important role in the belief systems of pre-service teachers, need to be evaluated in terms of their affects on their attitudes towards utilizing computers and internet. The essential point is that attitudes occur when beliefs construct a unified structure and they affect individuals' tendency to act in a certain way to a specific situation. Therefore, teachers' beliefs about education would be effective on the teaching model they perceive as well as the methods and techniques they use. Utilization of computers and internet are one of the fields, towards which teachers have negative or positive attitudes. The current age is under the reign of knowledge and technology. In order teaching and education systems to function effectively along with course curricula, it has become inevitable to utilize computers and technology. It is possible today to determine knowledge in two or three dimensions, which turns all individuals to knowledge operating machines.

Computers are machines that process knowledge shorter and without mistakes within its operating system. Many tasks are carried out regularly which challenges the limits of the mind. Computers are made use of in teaching of almost all lessons in education. Computer-assisted education and computer literacy have become commonly spoken concepts. Computer-assisted education allows for education and teaching as well as repetition and practicing, student supporting in various ways, interactive explanation and creating databases. Computer-assisted education is carried out through internet. Internet is a worldwide network of computers connected to each other for sharing information. In the center of this international network, there are computers that are running continuously in high-speed connections with each other. Computers are connected to these computers through the Internet Service Provider (ISP). Thanks to the anonymous character of Internet, people of same opinions easily gather and form virtual communities, where they get the chance to know each other and turn these virtual relations into real ones, while expressing their opinions freely. Internet is a media where people with same knowledge gather in virtual environments and form new communities. Defined also as the network of computer networks, internet is growing rapidly and involving schools and libraries. In order to facilitate from computers and internet in the field of education, first of all, teachers and student are required to prepare and have the related experience. In order to use computers and internet productively in education, teachers ought to understand how teaching – learning process functions and the role of educational technology within this process. When these are provided, teachers need to gain the skills to work with computers within the education process (Gunes, 1991).

The most important critical issue within the education process is commonly declared as the "teacher". The renovations in education in terms of method, content or technology, are only effective provided that they are helpful for teachers. Getting the highest profit from the computer-assisted education programs depend on teachers. That is because; teachers are the people who decide on the time to be allocated by students to utilizing computers as well as guiding them in terms of the method to be used and the ways to interact. This affects the education and teaching process. In utilizing computers and internet within the education system, teachers and pre-service teachers need to interact within the appropriate borders they have set according to their educational beliefs. The main determinant of individuals' beliefs about education is the education philosophy. Accordingly, educational beliefs are required to be structured due to the educational beliefs (Yilmaz, Altinkurt & Coklu, 2011).

Education philosophy aims to explain the problems affecting education as well as concepts, thoughts and principles that guide education (Ergun, 2009). Although teachers are not trained within a certain education philosophy, it develops some basic thoughts and beliefs in them. In structuring of these thoughts and beliefs, some factors are effective such as the received training, approach to life as

well as the school and home environments. The opinions and beliefs of teachers about education is the indicator of their education system. All teachers could have one or more philosophical understandings. This understanding could negatively or positively affect a teacher's academic and professional life. The philosophical thoughts of teachers affect their understanding of education and teaching as well as their approach to the utilization of computers and internet. Teachers, who support change, are open to all kinds of renovations, while some others could have more traditional approaches to embrace and use the new tools. This affects a teacher's utilization of computers and internet in his/her teaching (Duman & Ulubey, 2008). The philosophical approaches that teachers have would affect their attitudes towards utilizing computers and internet positively or negatively. The philosophical thoughts of teachers could lead them to create an enriched learning environment or an ordinary one. The educational beliefs scale used in this study is structured upon the perennialist, realist, progressivist, reconstructionist and existentialist philosophies. According to perennialists, the aim of education is to improve human mind and spine so as to stay in line with not the world s/he lives in but also the universal truth while using the rules of mind effectively and accurately by using deduction, being free and responsible, working in a disciplined way, staying away from copying life, getting prepared for life and growing intellectual aristocrats. Realists perceive the aim of education as to enable young generations to socialize and bring them up as knowledgeable and skilled individuals by transferring the cultural and knowledge background of the community through history. According to progressivists, all applications within the education process should be related to motivation (Yayla, 2009).

This movement supports that knowledge is attained through the scientific approach via experimenting and failing, where student is in the center of education with active involvement. Education is not a preparation for life but the life itself, therefore, the content of the lessons should consist of knowledge, skills, design and problems that could attract students. The philosophy of reconstructionism perceives the main aim of education as the reconstruction of the society in order to overcome the cultural crisis of our age. Education is used as a vehicle to establish a world with common values. Education is not only the life but also the future. Through education, society ought to be reshaped and reorganized continuously. According to the existentialists, education shall be organized so as to enrich an individual's approach to life and make choices. Social events and phenomena shall be open to students for making their choices in wide ranges and varieties. Because they are tools for individuals allowing them to actualize themselves (Sonmez, 2002; Erden, 2007).

Shortly, teachers need to have perceptions for utilizing computers and internet in education in such a way to make use of education as a target or tool. One of the indicators of such a perception is their beliefs. One of the main aims of education is the learning of opinions, while the main aim of Internet is to share opinions. Therefore, computers and internet provide environments for individuals where opinions could be seen, learnt and shared. That is the point where teachers play the key role in guiding their students through their different approaches and beliefs. Beliefs about education would affect the quality of the new generations according to the way teachers' train. Accordingly, this study is planned with the aim of revealing the relationship between the beliefs of pre-service teachers and their attitudes towards computers and internet.

2. Method

2.1. Research Model

This study, aiming to determine the relationship between pre-service teachers' beliefs about education and their attitudes towards utilizing computers and internet, is a descriptive study in the scanning model. In the study, the relationship between pre-service teachers' beliefs about education and their attitudes towards utilizing computers and internet is analyzed.

2.2. Sampling

- The sampling of the study consisted of 270 pre-service teachers studying at Hacettepe University, Faculty of Education within the 2010 – 2011 academic year. Participating pre-

service teachers are students of Physics Education, Math Education, Chemistry Education and Biology Education departments.

2.3. Data Collection Tools

2.3.1. The Scale Of Beliefs About Education*: It was developed by Yilmaz et al.(2011) in order to determine the beliefs of teachers and pre-service teachers. The scale consists of 40 items and is structured in 5 point Likert type. It has a structure of 5 factors. The reliability coefficients for these subscales change between 0.70–0.91. The Scale of Beliefs About Education consisted of independent subscales therefore a total score was not obtained. Therefore the Cronbach Alpha coefficient was not calculated for the whole scale but was calculated for subscales. The internal consistency coefficients showed that the scale was highly reliable.

2.3.2. Scale Of Attitudes Towards The Utilization Of Internet: The scale, which was developed by Tavsancil and Keser (2002) in order to assess students' attitudes towards using Internet was administered twice before and after the application. The scale was structured within the 5 point Likert type. The Cronbach Alpha coefficient of the scale was calculated as 0.89. The attitude scale consisted of 6 factors and 31 items.

2.3.3. Scale Of Attitudes Towards Using Computers: The Computer Attitude Scale (CAS) was used in the study in order to determine students' attitudes towards computers. It was developed by Loyd and Gressard (1986) and was adapted to Turkish by Berberoglu and Calikoglu (1992). Statistics showed that Cronbach Alpha internal consistency was 0.90. The attitude scale was prepared in 5-point Likert-type with four factors and 40 items.

3. FINDINGS AND RESULTS

The study analyzed a potential relationship between the beliefs of pre-service teachers about education and their attitudes toward utilizing computers and internet. When data are being evaluated, descriptive statistical techniques are used and it's found that the variables of Skewness and Kurtosis values are between (-1;1). In other words, at the end of the statistical analyzes it's seen that parameters show normal distribution and Pearson correlation test is done to determine the relations between variables. The results are summarized in the following Table 1.

Table 1: The Pearson Correlation Coefficient Values Of Pre-service Teachers' Beliefs About Education And Their Attitudes Towards Using Computers And Internet

		Beliefs About Education	Attitudes Towards Computers	Attitudes Towards Using internet
Beliefs About Education	p	1	.78	.72
	r		.00*	.00*
Attitudes Towards Computers	p	.78	1	.68
	r	.00*		.00*
Attitudes Towards Using Internet	p	.72	.68	1
	r	.00*	.00*	

* at the significance level of 0.05

As Table 1 displays, there are positive and significant relationship between the beliefs of pre-service teachers about education and their attitudes toward utilizing computers ($r = .78$, $r = .72$, $r = .68$; $p < .05$). The scores obtained from the sub dimensions of the Scale of Beliefs about Education could be

used independently. A potential relationship between the sub dimensions of the scale and the attitudes toward utilizing computers and internet.

Table 2: The Pearson Correlation Coefficient Values Between The Sub Dimensions Of The Scale Of Beliefs About Education And The Attitudes Of Pre-service Teachers Toward Utilizing Computers And Internet

Sub-Dimensions Of The Scale Of Beliefs About Education		Progressivism	Existentialism	Reconstructionism	Perennialism	Realism
Attitudes Towards Computers	r	.60	.82	.71	.27	.93
	p	.00*	.00*	.00*	.70	.18

* at the significance level of 0.05

The Pearson Correlation analysis results made for determining the potential relationship between the sub dimensions of the scale and the attitudes toward computers were displayed on Table 2. It was found that there were positive significant relationships between the progressivism, reconstructionism and existentialism sub dimensions of the Scale of Beliefs about Education and the attitudes towards computers (r =.60, r =.82, r =.71; p<.05).

Table 3: The Pearson Correlation Coefficient Values Of The Sub-Dimensions Of The Scale Of Beliefs About Education And Pre-service Teachers' Attitudes Towards Using Internet

Sub-Dimensions Of The Scale Of Beliefs About Education		Progressivism	Existentialism	Reconstructionism	Perennialism	Realism
Attitudes Using The Internet	r	.75	.62	.59	.07	.03
	p	.00*	.00*	.00*	.31	.62

* at the significance level of 0.05

Table 3 displays the results of the Pearson Correlation Analysis made in order to determine the potential significant relationship between the sub dimensions of the scale of beliefs about education and the scale of attitudes towards using the internet. The results were in parallel with the results of the attitude scale towards computers. Significant positive relationships were determined between the progressivism, reconstructionism and existentialism sub dimensions of the scale of beliefs about education and the scale of attitudes towards using the internet (r =.75, r =.62, r =.59; p<.05).

4. CONCLUSION AND DISCUSSION

The study concluded that there were positive and significant relationships between the beliefs of pre-service teachers about education and their attitudes towards computers and using internet. The opinions and beliefs of teachers about education are the indicators of their teaching approaches. Although there is a single teaching program in Turkey, it is administered differently in each classroom. All presentations in a teaching environment depend on the teacher's knowledge, skill, attitudes, beliefs and opinions. Teachers create the differences, creativity, critical thinking or the current situation. It is difficult to say that teachers teach within a single educational philosophy consciously; however, each teacher has an approach to education and teaching. The approach and beliefs of a teacher affects the teaching in the classroom. In determining the aims of a course, in organizing the learning environment and choosing the assessment method, teachers make use of the perrenialism, realism, progressivism, reconstructionism and existentialism education philosophies (Doganay & Sari, 2003). Teaching becomes more complex in time and improves, which leads to the increasing of knowledge to be learnt. It makes using computers as teaching tools obligatory in education in order to provide qualified and modern education. Computers fill an essential space

created by the inadequacy of traditional educational tools. Many tasks that are difficult to complete in a traditional educational environment could easily be accomplished via computers (Buyukozer 1990; Askar, 1990; Ogut, 2004). One of the most important products of technology is the internet. Since the relationship between technology and education is evident, internet is the heart of education at our age. Therefore, teachers need to improve themselves continuously. The more pre-service teachers make use of new technologies, the more effective their learning-teaching processes and environments shall become. Each teacher could perceive one or more philosophical approaches of education. This understanding could shape a teacher's whole academic and professional life and affect his/her teaching actions negatively or positively. The philosophical perceptions of teachers affect their approaches to technology and their utilization of technology. Today, technology involving computer and internet utilization is intermingled with education, which leads to the emerging of the concept "education and teaching technologies". The research has proved that student achievement increased in the environment where technology is used in education and their high level thinking skills improved (Allegra, Chiforive & Ottaviano, 2001; Boshuizen & Wopereis, 2003: adapted by Usluel, Mumcu, & Demiraslan 2007). In line with the literature, this study showed that the belief of pre-service teachers about education leads to positive attitudes towards using computers and internet in their learning-teaching environments (Duman & Ulubey, 2008).

Since the scores obtained from the sub-dimensions of the Scale of Beliefs about Education could be used independently, potential relationships between these sub-dimensions and attitudes towards using computers and internet were analyzed. The analysis concluded that the Scale of Beliefs about Education had positive significant relationship with the scale of attitudes towards computers in terms of its progressivism, reconstructionism and existentialism sub-dimensions. The same conclusion was come also about the beliefs about education and utilization of internet. One of the basic principles of progressivism sub-dimension is its student-centered structure with learning through problem solving and experiences. Therefore, it supports an improvement-centered social structure and educational approach. This is in line with using computers and internet technologies. Pre-service teachers' tendency to use computers and internet in their teaching environments is in parallel with the progressivist approach. In reconstructionist education philosophy education foresees a social structure where social and cultural values of the modern world are structured and requires individuals to be acknowledged about the requirements of the modern age. It supports application studies in teaching where students experience themselves. A student should be able to carry every topic into the classroom and discuss about them. Programs ought to be quite flexible and modified according to students' expectations and requests (Sonmez, 2002: 87). Reconstructionism focuses on technology in the presentation of the lesson, where student is in the center. The programs need to be technology-assisted. Computers, internet and such technological tools need to be made us of in preparing and presenting lessons. Students shall learn by using technology (Sonmez, 2002). Existentialist educational philosophy sees the aim of education as an individual's improvement of him/herself. While supporting the idea that individuals shall not be slaves of technology, self-improved and independent individuals shall be brought up. Therefore, education shall be organized so as to enrich an individual's approach to life and enable him/her to make choices. Social and natural phenomena and events shall be presented to students in a wide range and variety. However, utilization of computers and internet in the educational environments shall be under certain conditions. This shows that teachers need to limit the utilization of internet and computers at certain points. Existentialist philosophy expects teachers to prevent students from being slaves of technology while enabling them to develop skills to learn by themselves.

Teachers need to integrate their own philosophical thoughts into technology. A teacher without this intention would stay behind in the modern age. The new generation could be structured by pre-service teachers, who are open to technology in terms of understanding and using it. Otherwise, trying new methods in traditional approaches would cause negative attitudes. The opinions and beliefs of teachers about education are indicators of the education they provide. Although there is a single teaching program in Turkey, it is administered differently in each classroom. All presentations in a teaching environment depend on the teacher's knowledge, skill, attitudes, beliefs and opinions. Teachers create the differences, creativity, critical thinking or the current situation. It is difficult to say

that teachers teach within a single educational philosophy consciously; however, each teacher has an approach to education and teaching. The approach and beliefs of a teacher affects the teaching in the classroom. In determining the aims of a course, in organizing the learning environment and choosing the assessment method, teachers make use of the perrenialism, realism, progressivism, reconstructionism and existentialism education philosophies (Doganay & Sari, 2003). Therefore, determining the philosophical approaches of the new generation pre-service teachers is essential in terms of their using technology in education effectively and functionally.

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Extended Abstract

Bilimsel bilgilerin, yaşantımızdaki sorunların saptanmasında ve çözümlenmesinde kullanılması, toplumları bilgi toplumu haline getirmektedir. Günümüz bilgi toplumlarında, eğitim ve öğretimin başat karakteri öğretmenin rolü de değişmekte, öğretmenlerin yaşam boyu öğrenme ve öğretme becerilerine sahip bireyler haline gelmeleri beklenmektedir. Bilgi toplumlarında, bilgi okuryazarı olan öğretmenlere ihtiyaç duyulmaktadır. Bilgi okuryazarlığı kısaca, bilgi gereksinimini hissetme, tanımlama, bilgiye ulaşma ve bilgiyi değerlendirme olarak tanımlanmaktadır. Bilgi okuryazarı olan bir kişide olması gereken niteliklerin bazıları; bilgiyi doğru ve eksiksiz tanıyabilme, bilgi ihtiyacını sorularla ortaya dökebilme ve değerlendirebilme, potansiyel bilgi kaynaklarını tanımlayabilme, bilgisayar ve internet teknolojilerini kullanabilmedir. Bir öğretmenin bu özelliklere sahip olabilmesi için sağlam bir eğitim yapısına ihtiyacı vardır. Bu eğitim altyapısını, onun eğitime yönelik inançları şekillendirir. İnançlar, bireylerin yaşamları boyunca aldıkları tüm kararların, yaptıkları tüm seçimlerin ve gösterdikleri tüm davranışların en güçlü belirleyicileridir. Öğretmenlerin, bilgisayar ve internet kullanımlarında da, eğitime bakış açıları; eğitimi amaç, araç ya da farklı şekillerde kullanabilecek bir görüşe sahip olmaları, eğitime yönelik inançlarıyla yakından ilişkilidir. Bu nedenle, öğretmen adaylarının inanç sistemleri içinde önemli yeri olan eğitime yönelik inançlarının, sürekli etkileşim içinde oldukları ve öğrenme-öğretme ortamlarında yararlandıkları bilgisayar ve internet kullanımlarına yönelik tutumları üzerindeki etkisinin değerlendirilmesi büyük önem taşımaktadır. Çalışma bu görüşlerden hareketle, öğretmen adaylarının eğitim inançları ile bilgisayar ve internete yönelik tutumları arasındaki ilişkiyi ortaya çıkarabilmek için planlanmıştır.

Öğretmen adaylarının eğitime yönelik inançlarının bilgisayar ve internet kullanımına yönelik tutumlarına etkisini incelemeyi amaçlayan bu araştırma, tarama modelinde betimsel bir araştırma niteliğindedir. Araştırmada, öğretmen adaylarının eğitime yönelik inançları ile bilgisayar ve internet kullanımlarına yönelik tutumları arasındaki ilişki araştırılmıştır. Araştırmanın çalışma grubunu 270 öğretmen adayı oluşturmuştur. Öğretmen adaylarının eğitim inançlarını belirlemek amacıyla kullanılan "Eğitim İnançları Ölçeği", 40 maddeden oluşmaktadır. Ölçek, 5'li Likert tipinde yapılandırılmıştır. Yapılan açımlayıcı faktör analizi sonucunda ölçeğin, beş alt faktöre ayrıldığı belirlenmiştir. Eğitim İnançları Ölçeği'nin ilk boyutu olan "İlerlemecilik" boyutuna ilişkin Cronbach-Alfa iç tutarlılık katsayısı 0.91'dir. Bu katsayı sırasıyla ikinci boyut olan "Varoluşçu Eğitim" boyutu için 0.89; üçüncü boyut olan "Yeniden Kurmacılık" boyutu için 0.81; dördüncü boyut olan "Daimicilik" boyutu için 0.70; beşinci boyutu olan "Esasicilik" boyutu için ise 0.70'tir. Eğitim İnançları Ölçeği, birbirinden bağımsız alt ölçeklerden oluştuğu için toplam puan elde edilememiştir. Bu nedenle araştırmacılar tarafından ölçeğin tamamı için alfa katsayısı hesaplanmamış sadece alt ölçekler için hesaplanmıştır. Hesaplanan iç tutarlılık katsayıları, ölçeğin güvenirliğinin yüksek düzeyde olduğunu göstermektedir. Araştırma kapsamında öğrencilerin internet kullanımına yönelik tutumlarını belirlemek için kullanılan "İnternet Kullanımına Yönelik Tutum Ölçeği", altı faktörlü bir yapıya sahip olup, 31 maddeden oluşmaktadır. Ölçek, 5'li Likert tipinde yapılandırılmıştır ve Cronbach Alfa iç tutarlılık katsayısı 0.89

olarak hesaplanmıştır. Ayrıca araştırmada öğrencilerin bilgisayarlara karşı tutumlarını tespit etmek amacıyla "Bilgisayar Tutum Ölçeği" kullanılmıştır. Ölçeğin Cronbach Alfa iç tutarlılık katsayısı 0.90 olarak belirlenmiştir. Tutum ölçeği, 5'li Likert tipinde yapılandırılmıştır ve 40 maddeden oluşmaktadır.

Araştırmada öğretmen adaylarının eğitime yönelik inançları ile bilgisayara ve internet kullanımına yönelik tutumları arasında ilişki olup olmadığı incelenmiştir. Yapılan Pearson Korelasyon analizi sonucunda, öğretmen adaylarının eğitime yönelik inançları ile bilgisayara ve internet kullanımına yönelik tutumları arasında anlamlı pozitif yönlü ilişkilerin bulunduğu belirlenmiştir ($r = .78$, $r = .72$, $r = .68$; $p < .05$). Eğitime yönelik inançlar ölçeğinin alt boyutlardan elde edilecek puanların ayrı ayrı kullanılabilmektedir. Bundan dolayı söz konusu ölçme aracının alt boyutları ile bilgisayara ve internet kullanımına yönelik tutumlar arasında anlamlı ilişkilerin olup olmadığı araştırılmıştır. Eğitim İnançları Ölçeği'nin ilerlemecilik, yeniden kurmacılık ve varoluşçu eğitim alt boyutları ile öğretmen adaylarının bilgisayara yönelik tutumları arasında anlamlı pozitif yönlü ilişkilerin ($r = .60$, $r = .82$, $r = .71$; $p < .05$) olduğu belirlenmiştir. Eğitim İnançları Ölçeği'nin alt boyutları ile İnternet Kullanımına Yönelik Tutum Ölçeği arasında anlamlı ilişkilerin olup olmadığını belirlemek için Pearson Korelasyon analizi yapılmıştır. Elde edilen sonuçlar, Bilgisayara Yönelik Tutum Ölçeği sonuçlarıyla paralellik göstermektedir. Öğretmen adaylarının internet kullanımına yönelik tutumları ile Eğitim İnançları Ölçeği'nin ilerlemecilik, yeniden kurmacılık ve varoluşçu eğitim alt boyutları arasında anlamlı pozitif yönlü ilişkilerin ($r = .75$, $r = .62$, $r = .59$; $p < .05$) olduğu belirlenmiştir.

Araştırmada, öğretmen adaylarının eğitime yönelik inançları ile bilgisayara ve internet kullanımına yönelik tutumları arasında anlamlı pozitif yönlü ilişkilerin bulunduğu belirlenmiştir. Öğretmenlerin eğitim hakkındaki görüş ve inanışları, sundukları eğitimin de belirleyicisidir. Öğretimin gün geçtikçe karmaşıklaşması, gelişmeyle birlikte öğrenilecek bilgilerin artması, nitelikli ve çağdaş eğitim amacıyla, bilgisayarların eğitimde araç olarak kullanılmasını zorunlu kılmaktadır. Bilgisayarlar geleneksel öğretim araç ve gereçlerinin yetersiz kaldığı pek çok konuda önemli bir boşluğu doldurmaktadırlar. Geleneksel öğretim ortamında gerçekleştirilmesi zor veya olanaksız pek çok iş, bilgisayarlarla kolaylıkla başarılabilmektedir. Teknolojinin önemli ürünlerinden biri internettir. Teknolojinin eğitimle olan ilişkisi kaçınılmaz olduğuna göre, internet çağımızda eğitimin can damarıdır. Bu nedenle, öğretmenler de kendilerini sürekli yenilemelidirler. Öğretmen adayları, yeni teknolojileri ne denli kullanabilirlerse öğrenme-öğretme süreç ve ortamlarını da o denli etkili, verimli kullanabileceklerdir. Her öğretmenin bir ya da birden fazla felsefi anlayışı olabilir. Bu anlayış, öğretmenin tüm akademik ve mesleki yaşamını şekillendirecek ve eylemlerini, olumlu ya da olumsuz olması yönünde etkileyebilecektir. Öğretmenlerin felsefi görüşleri, eğitim-öğretim anlayışlarını, teknolojiye bakış ve teknolojiyi kullanma durumlarını da etkiler. Öğretmenlerin benimsediği felsefi anlayışları, onların eğitim inançlarının da belirleyicisidir. Söz konusu araştırmada, öğretmen adaylarının, benimsediği eğitim inançlarının, onların öğrenme-öğretme ortamlarında bilgisayar ve internet kullanımlarıyla ilgili olumlu tutumlar içinde olduklarını göstermektedir ve bu sonuç, daha önceki çalışmaların sonuçlarıyla da uyum içindedir. Öğretmenlerin, felsefi düşünceleriyle şekillendirdikleri eğitim inançları ile teknolojiyi birleştirmeleri gerekmektedir. Bunu yapamayan öğretmen, çağın gerisinde kalacaktır. Yeni kuşağı, ancak teknolojiyle barışık, onu benimseyen ve kullanan yeni nesil öğretmen adayları ile yapılandırmak mümkün olabilir. Bu yüzden, yeni nesil öğretmen adaylarının felsefi tutumlarının belirlenmesi, öğretim ortamında teknolojiyi etkili, amacına uygun ve kontrollü bir biçimde kullanmasının değerlendirilmesi açısından çok büyük bir öneme sahiptir.