Examination of Teacher Candidates' Opinions on the Double Major Program by the Learning Process Model

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Abstract

The purpose of this research is to determine the views of teacher candidates on the Double Major Program by the learning process model. While examining the views of teacher candidates with the learning process model, six stages of the model were taken into account such as unaware of the model, awareness, understanding, commitment, practice and reflection. The study group of the research based on the phenomenology design consists of 35 teacher candidates studying at the Faculty of Education in Siirt University. In the study, in which an open-ended questionnaire form was used, the data were analyzed through a qualitative program. Content analysis method was used in the analysis. As a result of the research; It was observed that the participants of the Double Major Program expressed their opinions by using the learning process model stages. It has been concluded that the participants with these views do not have knowledge about the Double Major Program and do not seem willing to learn about the different departments. Afterwards, they stated that their awareness improved when they enrolled in the Double Major Program and they were willing to learn. At the same time, the participants questioned the course contents of other departments with a sense of curiosity and discovery and explained the opportunities provided by the two diplomas. Participants who approached the Double Major Program from a positive point of view, on the other hand, mentioned the negative aspects of the evaluation process. In the last step of the learning process model, they emphasized contributions of self-evaluation in evaluation more. In general, if the results are summarized, the participants do not have the readiness for the Double Major Program at the stage of ignorance of the learning process model. The participants see that there is a diversity due to the course contents in the program at the stage of awareness. The participants approach the program from a multidimensional perspective at the stage of understanding. In the stage of commitment, the participants talk about the difficulties of process and outcome evaluation. During the stage of enactment, they talk about the benefits of being educated in different departments and evaluate themselves on time management. At this stage, especially the participants critically approach the positive and negative aspects of themselves by using their introspective intelligence. At the stage of reflection, the participants refer to the measurement and evaluation possibilities.

Keywords: *Learning, Learning process model, Double major, Minor program.*

INTRODUCTION

The learning process model adopts an understanding that explains the change in student behavior gradually (Yamaguchi, Takemori, & Takadama, 2013). In the learning process model, each stage is questioned by the individual. The individual reviews their learning with the question that is "what did we learn?". He/she both changes the information he/she reaches and tries to improve the missing points with the question that is "How did we learn?". This ensures that the feedback loop of the institution where the individual is located is used more effectively and that the institutional policies are changed by questioning. Individual and team learning is supported through "double-loop learning" between the individual and the institution. While being supported, the individual should focus on learning, the environment should be arranged accordingly, and different learning ways should be related to them (See: Figure 1, Buckler, 1996: 32).
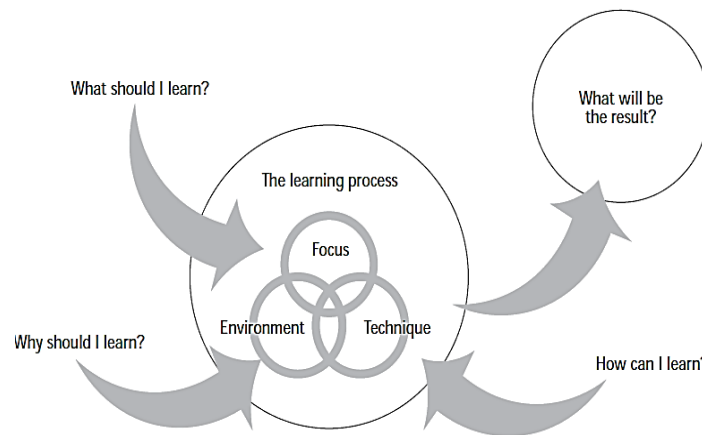

Figure 1. *Learning as a process*

As seen in Figure 1, the learning process model has three components. These are focus, environment and technique (Maidin, Hamzah, 2010). In focus; every learning process begins with outlining a particular topic. The focus parameters of the learning process are determined with the outlines drawn. These parameters constitute the knowledge areas (Alavi & Leidner, 2001). Appropriate environmental conditions must be found in transforming the information in each parameter into behavior. Every condition that occurs should be supported by the method and technique used. Because the techniques and methods chosen in learning are considered important. Classroom environments in the e-learning age are not the same with the techniques and methods used in a traditional classroom environment. The techniques and models of the two classroom environments are different from each other. Considering the teacher differences, the information obtained in the classroom environment is transferred to the student using various techniques (Nsikan-Abasi, Peni, & Olajuwon, 2016).

For this reason, each ring in the model is related to each other. In other words, each ring interacts with each other. In this model, which is expressed as the reality ring, the individual is made aware of how to learn? Why to learn? For what to learn? (Yamaguchi, Takemori, & Takadama, 2013; Buckler, 1996). There are reflections of two models on the basis of awareness formed in the learning process model (See: Table 1, Buckler, 1996: 32).

Table 1. *Learning methods – two extremes*

	Taught ⟺	Discovery
Model	Learn theory based on research. Test by application. Teach others, until better theory is developed.	Identify problems. Experiment to discover solutions. Develop theory. Change behaviour. Apply to similar situations.
Focus	Teacher-centred Learning managed by the organization	Learner-centred Learning managed by the individual
Motivation	Extrinsic	Intrinsic
Culture	Controlled	Empowered
Theoretical basis	Behaviourist school – Skinner et al.	Gestalt school – Kohler et al.
Advantages	Consistency Conformity Low risk	Creativity Innovation Responsiveness to customers
Disadvantages	Can stifle intrinsic motivation Can cause conditioned responses which create barriers to change and learning	Can focus on personal rather than organizational objectives Higher risk of failure

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As seen in Table 1, learnings in the learning process model are based on two models as taught and discovery. The information obtained in the taught model is researched and transformed into observable behavior (Saraceni & Júnior, 2012). Since there is a change in behavior, this situation continues until the process of putting forward different theories. The teacher is a determining factor in these processes. Schools provide education in accordance with the traditional education approach. It is tried to reach the gains determined by the rules and formal trainings. For this reason, there is consistency and conformity between learnings. Since it is implemented with a formal plan, it is met with the least problem. Considering the negative side of the taught model, intrinsic motivation of her/him may be low as the individual may remain passive in the learning process. Low motivation and interest create obstacles to the individual's new learning. On the other hand, the discovery model improves the problem-solving skills of the individual. The individual produces solutions to the problems encountered, discovers new information, reflects this on his behavior, and uses them in solving similar problems. In this respect, it is seen that the model is suitable for student-centred education. The individual can make creative, innovative and independent decisions with student-centred education. He/she increases his/her motivation towards learning by using his/her high-level skills. The individual constantly uses the method of invention in learning. In other words, learning is transferred to the individual with a holistic understanding and there is "individual" at the center of learning. Although the individual is in the center, this situation causes negative situations in the application of the model. Because the aims and practices of the institution in which the individual is located are as important as the individual in learning. Here, the goals of the institution lag behind the goals of the individual. At the same time, it is expected that the individual will adapt the information obtained through the invention to his personal purposes and minimize the risk of failure. Otherwise, it will be difficult for the individual to adapt to his personal goals and transform them into behavior (Buckler, 1996).

Looking at the common point of the taught and discovery model, it is seen that they are based on solid theories. Both models have advantages and disadvantages. Contrary to a black/white, good/bad situation, it is suggested that models should be handled with the benefits they provide to the individual and the stages in gaining the determined goals. The environmental factor should not be overlooked here. With the stimuli coming from the environment, the individual uses his internal and external motivation. The individual adds his attitude, beliefs, values and reactions to the process while using these. These stimuli may differ in each individual. As can be seen in Figure 2, the resulting differences are interpreted through various learning stages (See: Figure 2, Buckler, 1996: 33).
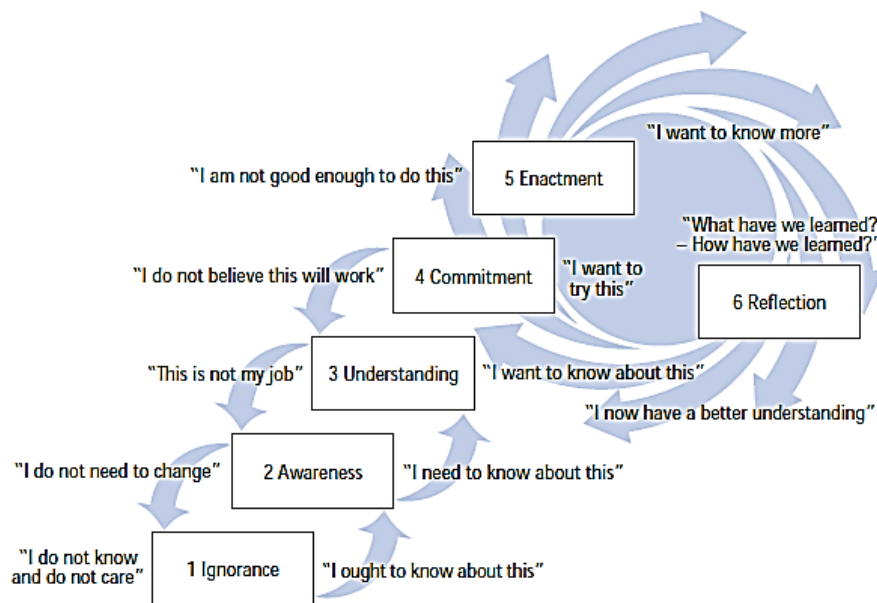
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Figure 2. *The stages of learning*

As seen in Figure 2, learning takes place in six stages in the learning process model. The stages in the model form the basis of the organizational learning cycle. Organizational learning is a concept that emerged with the aim of supporting change and cognitive development of managers. In the concept, it

is emphasized that organizations should make continuous changes and improvements. Technological advances in changes and improvements were seen as a source of reference. Although these sources are seen in the studies of Reynolds and Ablett (1998) and Steiner (1998), Buckler (1996) also discussed them in detail in the learning process model and stages (Cited by Yeo, 2005). The first stage of the model is ignorance. The stage of ignorance consists of the thought that "No one can know that they do not know". For this reason, no crime is charged to people who are ignorant or have no knowledge. Not committing a crime can be a starting point for that individual. In the beginning, the individual starts to question and questioning is easier at this stage. The second stage is awareness. In awareness, the individual makes sufficient effort to understand and research a subject. The motivation of the individual is important in this effort. In the awareness stage, the individual gives typical answers to the questions asked, such as "This is not my job" or "I am not paid to know this". The individual may sometimes need teamwork in every question he/she shows and answers for learning, but the peer support given to the individual may not always produce positive results. Conversely, an apparently poorly structured reward mechanism and team structure can reinforce the obstacles faced by the individual. The third stage is understanding. In understanding, the individual has to work harder to learn. While working, he/she should reach the information with a versatile cycle. The information obtained will be meaningful as long as it meets the needs of the individual and the organization. New information that is meaningful can challenge the values and beliefs of the individual's subconscious. This is called creative tension. The individual needs to be willing and supported here. Supports are not expected by an institution or organization, but rather by the intrinsic motivation of the individual. Because the individual can use defense mechanisms when faced with obstacles. In this understanding, which is expressed as defensive reasoning, the individual seeks solutions to overcome the obstacles in the way of learning. For this, he/she tries to use his/her high level of self-awareness skills. While using his/her awareness, he/she puts it into practice with the behavior of commitment, which is the fourth stage. In the commitment stage, the individual wants to add new schemas to their schemas. He/she need more information to turn what they have learned into practice (Buckler, 1996).

The other stage of the learning process model is enactment. In the enactment stage, the individual embodies the knowledge he/she has learned. Sometimes in such a situation, the individual may go for new improvements for learning. When necessary, the institution should provide the individual with the opportunity in this regard. Innovative and creative decisions can be made in line with the possibilities. The resulting decisions may constitute a source of advantage for future competitive environments. Finally, with the reflection stage, the individual realizes his/her deep learning. What did he/she learn? and how did he/she learn? is questioned at this stage (Buckler, 1996). In all these stages, the guidance and support of the person in the leadership position is considered too important to be ignored (Gil & Mataveli, 2018). The leader ensures that the individual reaches the goal according to the questions asked at the stages and the measures he/she takes (See: Table 2, Yamaguchi, Takemori ve Takadama, 2013; 73).

Table 2. *The stages of learning process*

Stage	Meaning	The role of leadership
6- Reflection	"What have we learned?" "How have we learned?"	
5 -Enactment	"I want to try this".	Allow risk taking.
4- Commitment	"I want to know about this".	Remove barriers
3- Understanding	"I need to know about this".	Develop shared vision "whys".
2- Awareness	"I ought to know about this".	Develop shared vision "whats".
1 -Ignorance	"I do not know and do not care".	Question.

In the learning process model, the individual is initially seen as an input. Who will set the individual's goals? He/she begins to question the process with such questions. The leader should be equipped to answer every question in the learning process. In other words, individuals can stop learning as a result of the problems they encounter during the learning process. In this case, as seen in Table 2, the leader should assume the leadership role that will guide the student's learning. This bond/interaction between the role of the leader and the individual should be taken into account at every step of the learning process model (Yamaguchi, Takemori, & Takadama, 2013).

The learning process model offers the individual different perspectives on a subject. It develops the awareness of the individual in interdisciplinary studies. For example, the individual is studying in a Double Major Program (DAP) in any department. Students are given the right to have two undergraduate diplomas with the Double Major program implemented in Turkey since 1998 (Şahin and Öztürk, 2020). Considering the general feature of this program, it is stated that it requires interdisciplinary work and it is aimed for the individual to have many skills. In fact, it is said that students who do double major are equipped not only with the knowledge in their own department, but also with the knowledge and skills in other departments. Such a situation makes the Double Major program more effective (Hopcan, Polat, & Adıgüzel, 2014).

As can be seen, the purpose of the learning process model is to help organizations get better results (Yeo, 2005). In this model, the student takes an active role as well as teacher the leader. As an institution, schools are a place where mutual relations are established between every element of education (such as teacher, student). In the effective learning that takes place here, the success of the institution is mentioned as much as the individual. Because, as in the learning process model, "learning" is a team effort (Bader, 2016). For this reason, the individual's feelings, thoughts, performance, goals, and expectations for the future should be taken into account in the steps followed and applied in an effective learning. With this aspect, the learning process puts the individual in the center. From the first stage to the last stage, it contributes to the individual in an affective sense. It determines the individual's reactions to events and facts. In other words, it is an individual's openness to learning through questioning, discovery and reactions. More studies are needed to make the learning process model, which deals with such important skills in individual learning, both understandable and practical. However, when the literature was searched, this research was carried out because there was no study in the country and a similar situation was observed abroad. From this point of view, the main purpose of this research is to examine the views of teacher candidates on the Double Major Program by considering the learning process model.

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METHOD

Model of the Research

Phenomenology, one of the qualitative research models, was used in the study. The phenomenology design focuses on specific phenomena and has an in-depth understanding. The feelings and thoughts of the individual about these phenomena are revealed (Yıldırım & Şimşek, 2013). In this study, the views of teacher candidates on the Double Major Program were examined by considering the learning process model.

Working Group

The number of students doing double major at Siirt University, Faculty of Education is 69, 16 are male and 53 are female students of these.
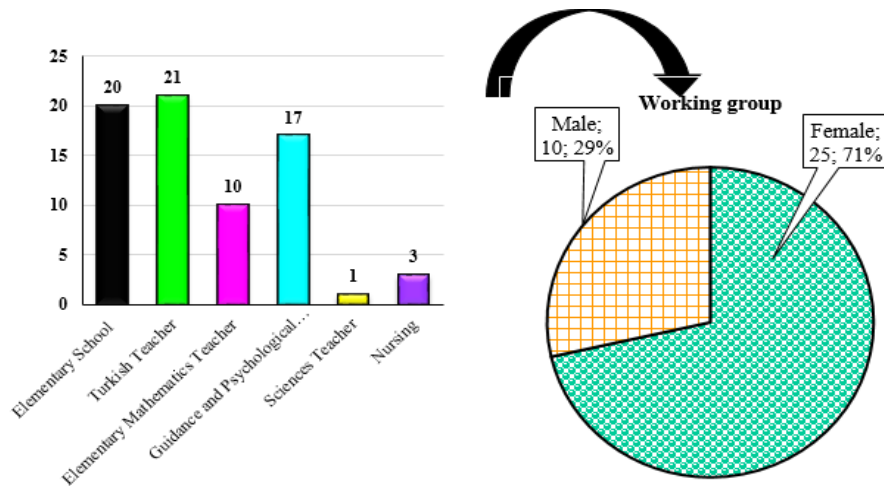
Graphic 1. *Demographic Information of Participants*

As can be seen in Graph 1, 69 students are enrolled in the Double Major Program at the Faculty of Education in Siirt University. 20 of the students are studying in Classroom Education, 21 in Turkish, 7 in Elementary Mathematics, 17 in Psychological Counselling and Guidance, 1 in Science Teaching and 3 in Nursing. 35 teacher candidates were included in the research on a voluntary basis. 25 (71%) are girls and 10 (29%) are boys of these. 12 of the participants are Classroom Education, 10 are Turkish, 4 are Elementary Mathematics, 8 are Psychological Counselling and Guidance and 1 is Science Teaching candidates.
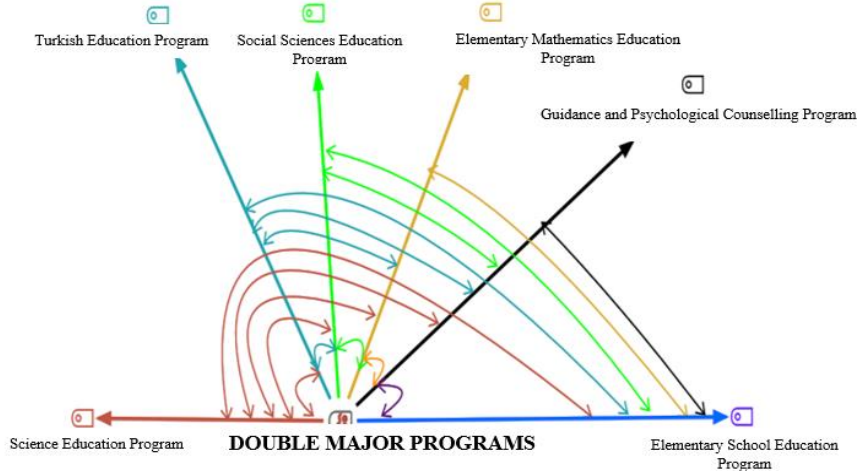

Figure 3. *Double Major Program Preferences*

As can be seen in Figure 3, teacher candidates can do a Double Major in programs in different departments. For example, if the teacher candidate is studying in the Turkish Language Teaching Program of Department of Turkish and Social Sciences Education in Faculty of Education, He/she can complete his/her education by doing a Double Major in Social Sciences Teaching, Classroom Teaching, Science Teachings, Elementary Mathematics and PCG programs. Similarly, it is seen that these preferences can be made among other departments as well. In making these choices, the conditions in the Siirt University Double Major Regulations and the Faculty of Education are taken into account.

Data collection tool

The open-ended questionnaire form developed by the researcher was used as a data collection tool in the research. Expert opinion was taken for the questions in the open-ended questionnaire form. Various arrangements were made in line with the clarity and scope of the questions, the form was applied to the teacher candidates in 20 minutes.

Analysis of Data

In the research, the data obtained from the open-ended questionnaire form were subjected to content analysis. Content analysis is a technique widely used in social sciences (Taylan, 2011). In other words, content analysis is used as a technique that systematically and objectively reveals certain views and thoughts stated in the text, and makes a series of transactions between the sender, the message and the message recipient (Koçak & Arun, 2006).

Certain stages were taken into account when using content analysis in the research. First of all, in the interviews with the participants, the papers containing the opinions of the participants were listed from 1 to 35. After sorting, the papers were read and coded by the researcher. After the codes were recorded in the code list, they were gathered under certain themes. Themes were created by taking into account the steps that Buckler had previously stated in the literature. The themes were reviewed by the researcher and interpreted in the findings section.

In order to ensure the consistency and objectivity of the reliability of the research, expert opinion was taken on the suitability of the codes and themes. Miles and Huberman (1994) reliability formula was used for the reliability of the researcher and expert opinion. [Confidence=consensus/consensus + disagreement)]. The reliability of the result obtained from the formula was found to be .94.

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For the internal validity of the research, the researcher transferred the themes created in the findings section without adding prejudices and included direct quotations within the framework of the principle of objectivity. While quoting, the codes C_1, C_2, C_3................ C_{35} were used for the participants.

FINDINGS

In the study, the views of teacher candidates on the Double Major Program were examined in line with the learning process model. The findings obtained from the opinions of the participants as a result of the examinations are shown in Figure 4.
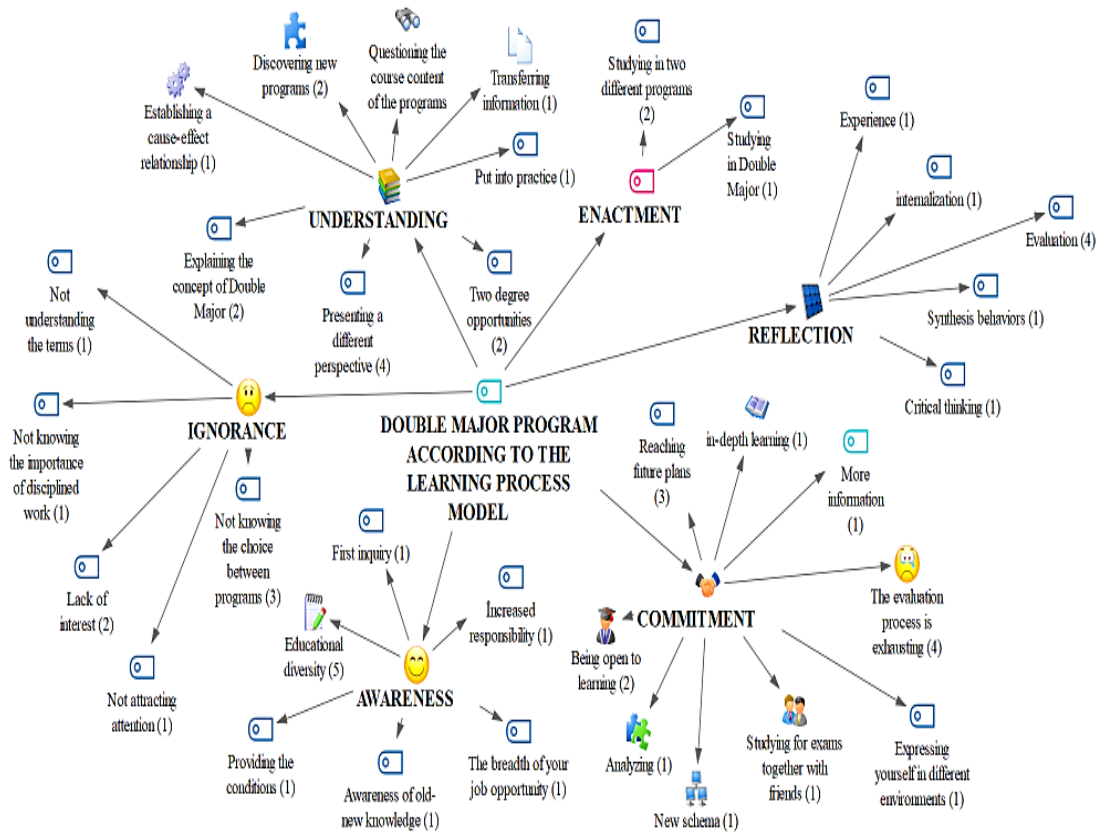

Figure 4. *Opinions of Teacher Candidates on Double Major Program According to the Learning Process Model - Code-Theory Model*

As can be seen in Figure 4, six themes were formed in the views of teacher candidates on the Double Major Program. These are ignorance, awareness, understanding, commitment, enactment and reflection. The detailed description of the themes is in the figures below.

1. The Theme of Ignorance

The theme of ignorance consists of five sub-themes, as seen in Figure 5. Quotations related to these sub-themes are given below.
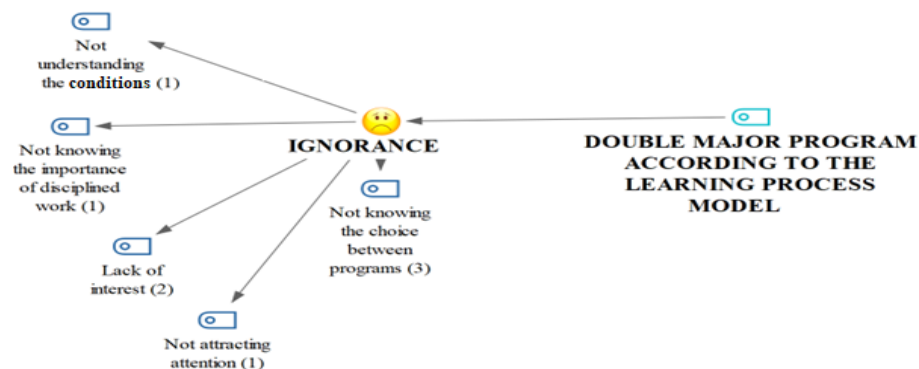

Figure 5. *The Theme of Ignorance - Code-Theory Model*

As seen in Figure 5, the theme of ignorance consists of sub-themes such as not understanding the conditions (f=1), not knowing the importance of disciplined work (f=1), lack of interest (f=2), not attracting attention (f=1) and not knowing the choice between programs (f=3). Thus, it can be said that under the theme of ignorance, the participants do not have information about other departments except the departments they read most, they do not know the situations that they should pay attention to when choosing the programs, and they are not interested in the programs. The opinions of the participants on this subject are given below in the form of quotations.

C_9:...it wasn't something that caught my attention when I first heard it. Because I did not know the contents of the chapters I was going to read.

C_{10}:.. there is no assignment in my normal department, I will study in another department... I will not be able to assign there either...

C_{13}:..I didn't pay much attention to the information about double major when I heard it from my friends.

C_{21}: ...you realize that something is important with the explanations made to you, but then you have to change your working conditions when you do a double major. Once you see it, you feel like "forget it".

C_{35}: I think double major causes people to make some decisions in their education life. Because at the end of the process, there is a double major. It takes hard work and willingness to get it. I could not see that effort in myself in the first years.

2. The Theme of Awareness

The theme of awareness consists of six sub-themes, as seen in Figure 6. Quotations related to these sub-themes are given below.
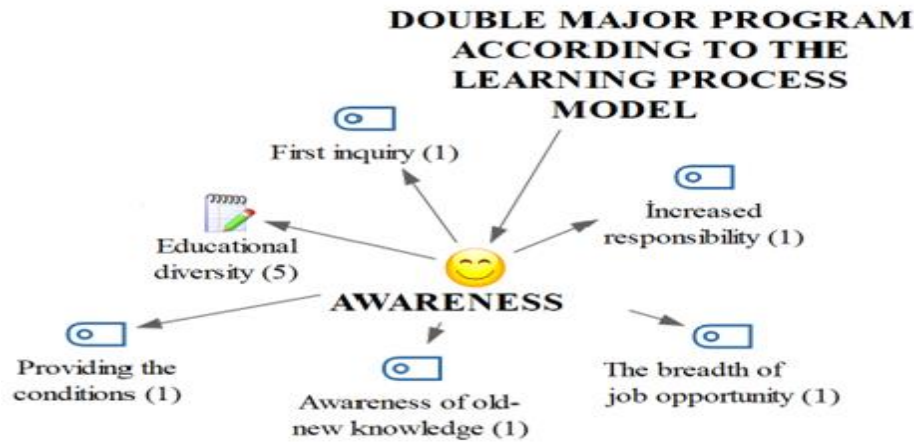

Figure 6. *Theme of Awareness - Code-Theory Model*

As seen in Figure 6, awareness theme consists of sub-themes such as first inquiry (f=1), increased responsibility (f=1), breadth of job opportunity (f=1), awareness of old-new knowledge (f=1), providing the conditions (f). =1) and educational diversity (f=5). Thus, it can be said that the participants stated that diversity in education was provided mostly thanks to the Double Major Program under the theme of awareness. The opinions of the participants on this subject are given below in the form of quotations.

C_1: When I decided to do a double major, I set a goal for myself. It was necessary to look at life from a multifaceted window.

C_5: Double major offered us options. This was a very good app. My intelligence and my preferences for learning were also suitable for the other department.

C_{11}:..I thought of it like this. Why I should not guarantee my future and job opportunities, before I enter the KPSS process? The university provides me with this condition. All I have to do is study and complete the double major program...

C_{18}: My friend encouraged me to do a double major. I took him/her as a model and did a double major. I saw that I had to learn a lot, I had to research.

C_{25}: The most beautiful aspect of double major is that you are both improving yourself and being open to learning.

3. The Theme of Understanding

The theme of understanding consists of eight sub-themes, as seen in Figure 7. Quotations related to these sub-themes are given below.
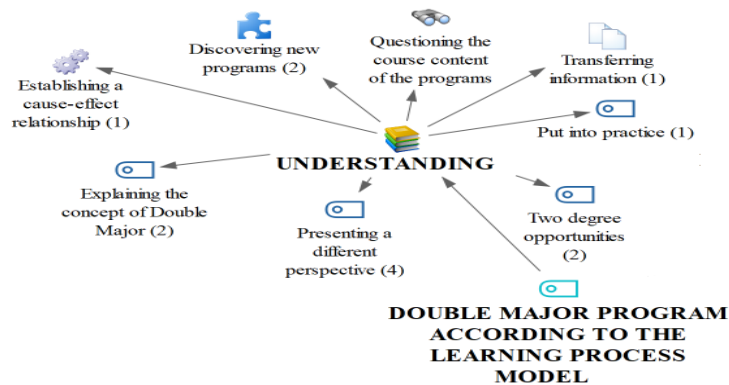

Figure 7. *Theme of Understanding - Code-Theory Model*

As seen in Figure 7, the theme of understanding consists of sub-themes such as questioning the course contents of the programs (f=1), transferring information (f=1), put into practice (f=1), two-degree opportunities (f=2), presenting a different perspective (f=4), explaining the concept of double major (f=2), establishing a cause-effect relationship (f=1) and discovering new programs (f=2). Thus, it can be said that the participants had different perspectives, received two diplomas, discovered new departments, and were able to explain the concept of double major, at most, under the theme of understanding. The opinions of the participants on this subject are given below in the form of quotations.

C_3: I'm glad I did the double major, I took the right decision. Because now I am doing a double major in classroom teaching, my perspective on the teaching profession has changed.

C_{14}: You are equipped with a double major. You're trusting yourself.

C_{15}: When you start a job, you have to spend more effort on learning.

C_{16}: Human is a thinking being. "Curiosity and discovery" lead people to innovations.

C_{17}: The positive aspect of double major is that you get two diplomas.

C_{22}: Having two diplomas at the same time in one's education life is both proud and means that a person takes the right decisions about himself.

C_{23}: When I started doing double major, I did more research about my department and the other department.

C_{24}: If there was a third major, I would read it too.

C_{26}: When starting something and learning new things, I try to absorb it at the beginning. I understand what it means to me. I think about what it will bring me.

C_{32}: When I starting double major, the first thing I investigated was "what is double major?".

4. The Theme of Commitment

Theme of commitment consists of five sub-themes as seen in Figure 8. Quotations related to these sub-themes are given below.

Figure 8. *Theme of Commitment - Code-Theory Model*

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As seen in Figure 8, the theme of commitment consists of sub-themes such as in-depth learning (f=1), more information (f=1), exhausting evaluation process (f=4), self-expression in different environments (f=1), studying for exams together with friends (f=1), new schema (f=1), analysing (f=1), being open to learning (f=2) and reaching future plans (f=3). Thus, it can be said that there are opinions about the double major program on the subjects of preparing for exams, taking more than one exam, cognitive fatigue caused by the evaluation processes, but being effective in reaching close and distant goals and being constantly open to learning under the theme of commitment. The opinions of the participants on this subject are given below in the form of quotations.

C_4: I am very tired during the midterm week. Because I have more than one exam in a day.

C_7: The worst aspect of double major is evaluation.

C_{20}: In some courses, we are evaluated in the process, and then we take an exam. This is mentally tiring for me.

C_{27}: While my friends cannot study for the exams of a department, I have to study for many exams.

C_{28}: After the midterm and final week, I can't come to myself for a few days. I am very tired physically and mentally.

C_{29}: ...I learn new things every time I study for the exam.

C_{31}: It is not possible to improve yourself without a goal. You have to work hard for the target... When you study in a double major, you take lessons from many teachers. You learn something from each of the m. This brings you closer to your goals.

C_{37}: Evaluation aspect of double major is tiring, but it helps you to have a more hopeful outlook on the future of your profession. Because you can find a job with a double degree.

5. *Themes of Enactment and Reflection*

The theme of enactment and reflection themes consists of different sub-themes, as seen in Figure 9. It is seen that the theme of enactment consists of two sub-themes and the theme of reflection consists of five sub-themes. Quotations related to these sub-themes are given below.
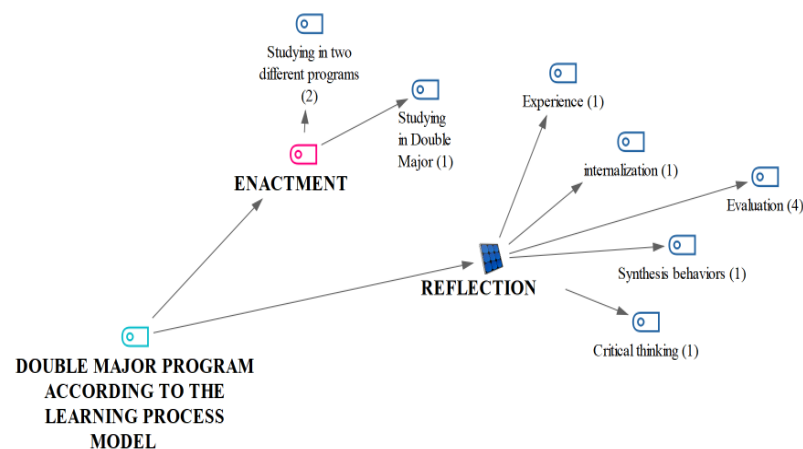
Figure 9. *Themes of Enactment and Reflection -Code-Theory Model*

As seen in Figure 9, theme of enactment consists of sub-themes such as studying in two different programs (f=2) and studying in double major (f=1); and theme of reflection consists of sub-themes such as experience (f=1), internalization (f=1), synthesis behaviors (f=1), critical thinking (f=1) and evaluation (f=4). Thus, it can be said that the participants are more likely to agree with the view that the double major program offers them options and makes peer and self-evaluation in these themes. The opinions of the participants on this subject are given below in the form of quotations.

C_2: Indeed, a person can evaluate himself in many ways with a double major.

C_8: In the past, I used to evaluate myself only by my success in my department. Now my scope of assessment has expanded.

C_{12}: My friends sometimes ask how I read in two department. I have difficulties, but I also ask myself questions about what I learned. This contributes positively to me.

C_{19}: In a double major, people are evaluated in different ways in different courses. Because the courses of some departments are applied and some courses are theoretical. It's nice to be considered

versatile. In double major, I take exams on the basis of departments. In fact, the knowledge of my course in one department helps me to study for the exam of my course in the other department.

C_{30}: I also heard it from my friends who do double major. The more a person knows, the more he/she has the ability to make comments and express himself in the community.

C_{33}: ...while I evaluate this process, I evaluate not only myself but also my friends. So, I observe their way of studying. I'm looking at their attendance. Then I compare myself and them... I cling to work more with the idea of doing the best.

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

According to the teacher candidates, the courses and contents of the departments in the double major are similar to each other. This contributes positively to their academic success. In other words, the information in the courses of the two departments can be transferred to each other very easily. Şahin and Öztürk's (2020) research supports this result. In the research, it has been observed that university students think multi-dimensionally with the double major program, two different diplomas make them feel good, the chance of being assigned to the departments they study in teacher appointments is low and therefore it increases the probability of being appointed by doing a double major in English departments. According to Buckler (1998), learning is a process that can be applied to individual, team or organizational levels, increases the existing potential and as a result cause changes in behavior. In this process, the psychological dimension is taken into account, and the individual's questioning in six stages and their feelings towards them are taken into account (Ozturk-Barlak, Arditi, Gunaydin, Kale, Yitmen, 2009). For example, reflection is defined as the ability to reveal and explain to oneself what he/she has planned, observed, or achieved in practice. Here, the individual's interests, concerns and successful etc. is considered important (Sandberg & Ohman, 2011). This importance is also taken into account in double major. Because students define double major as a program applied to increase their success and decrease their anxiety. In other words, according to teacher candidates, double major offers them the opportunity to find a job in the future. As Buckler (1998) states, learning is an adaptation process. A double major individual is also the harmony of the two majors they study (Hopcan, Polat, & Adıgüzel, 2014). Teacher candidates emphasize this harmony more especially in the "awareness" and "understanding" steps. Because he/she is aware of the purpose of the double major program. He/she tries to obtain information from many places in order to assimilate the purpose of the program more. The desire and effort to learn directs the teacher candidate to other higher levels. For example, in the study of Şahin and Öztürk (2020), 65.2% of the students at Necmettin Erbakan University who participated in the survey and 63.7% at Atatürk University want to do a double major. According to Pitt and Tepper (2012), the number of double majors at Vanderbilt University has increased to approximately 40% of all students. The number of double majors at the University of California has increased by 50% in 5 years; it has doubled since 1993 at the Massachusetts Institute of Technology. At Tufts University, one-third of students do a double major. 23% at Georgetown University (60% increase since 1996); At Washington University, 42% of students in 2002 chose a double major, increasing to 28% from 5 years ago and 40% at Brown. At these rates in different universities, students become aware of the "status" and "prestige" of the majors by doing double majors. In other words, the contribution of a department both in the field of science and in the economic sense emerges with the education that the individual receives during the double major program. In a double major, the social environment of the student is developing. The student has more access to social activities and scientific knowledge. The cognitive schema of the individual for many disciplines is developing more. Interpreting, analysing and discussing the topics come to the fore in this program. They are highly motivated and interested in their future profession and double major. They have a similar attitude towards the department they have won at university entrance and the double major they have studied.

According to teacher candidates, awareness and understanding steps are considered important in the dissemination of the double major program and in raising the awareness of the teacher candidates about this issue. For this, the individual and the institution should cooperate with each other and use communication channels effectively. In other words, a culture of sharing, cooperation and organization should be created in the creation of learning organizations (Rekogama, 2021). For this, first of all, definitions and explanations about organizational learning and learning organization should be known.

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In the definitions, it is seen that the term "learning organization" focuses on the "what" question. What are the characteristics that the organization and all its members can learn from in this focus? Expressions such as "learning organization" are shaped by stimuli coming from the internal and external environment. On the other hand, organizational learning seeks to answer the "how" question as much as the "what" question. That is, "how" learning is developed in an organization is examined (Yeo, 2005). The learning process model, on the other hand, contributes to individual and group success (Sudharatna, 2004). In particular, the role of the leader in individual contribution should not be overlooked. In fact, the leader ensures the formation of the culture of the institution (Brownell, 2008). In other words, the learning process is a model that allows focusing on the "what" of learning, goals or tasks. Questioning what and why in learning provides an overview of the learning process and constitutes the inputs of the learning process. Learning outcomes are the resulting behavioural change (Yamaguchi, Takemori, & Takadama, 2013). It is important to transfer information to different fields as a result of behavior change (Yeo, 2002). Buckler (1998) emphasizes the transfer of information in the learning process model. Saraceni and Júnior (2012), on the other hand, state that in their study, it is necessary to act in a team spirit as well as individually in the learning process model steps. Working with a team spirit has positive reflections on individuals and managers.

In short, the double major program has individual, social and economic benefits. As in the learning process model, it contributes to the affective dimension of the individual in an individual sense. When look at the learning process model, the individual questions the events psychologically in six stages and develops reactions accordingly. For example, in recent years, STEM has been seen as one of the concepts and educational understandings that are given importance in both schools and higher education. This education is seen as a discipline that brings together knowledge in science, technology, engineering and mathematics. Teachers and future teacher candidates need to be aware of the disciplines that make up STEM in order to produce more effective studies in the application of this discipline (Del Rossi & Hersch, 2016). For example, a teacher candidate studying at Turkish Language Teaching Program of Department of Turkish and Social Sciences Education of Faculty of Education in Siirt University, can do a double major from the Social Studies Teaching Program. In addition, teacher candidates studying in the Classroom Teaching Program of Basic Education Department of Faculty of Education are offered the opportunity to complete a double major in Elementary Mathematics, Science Teaching, Guidance and Psychological Counselling, Social Studies or Turkish Language Teaching. The teacher candidate can benefit from this opportunity under certain conditions. These; The teacher candidate must have no failed courses in the previous semesters, be studying in the 3rd semester at the earliest and the 5th semester at the latest (the specified semesters include the first semester of the 2nd year and the first semester of the 3rd year), and have a grade point average of at least 2.75 out of 4.00. However, he/she must be in the top 20% success rate in his/her class or he/she must have received a score equal to or higher than the base score of the double major program in the year he/she entered the university. Teacher candidates cannot apply to more than one double major program during the application period (https ://www.siirt.edu.tr).

Based on the results of the research, some suggestions are presented below:

The research was carried out on teacher candidates. The results of the study can be discussed comparatively by taking the opinions of the students who are doing double major in different departments and faculties.

Problems encountered about the Double Major Program can be determined by mixed studies.

Qualitative studies can be conducted on the contribution of the Double Major Program to the professional skills of teacher candidates.

The opinions of university students about the Double Major Program can be determined by different models and steps.

Considering the Learning Process Model steps, the views of university students on the Double Major Program can be determined by qualitative and quantitative studies.

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Öğretmen Adaylarunun Çift Anadal Programına İlişkin Görüşlerinin Öğrenme Süreç Modeli İle İncelenmesi

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Özet

Bu araştırmanın amacı, öğretmen adaylarının öğrenme süreç modeliyle Çift Anadal Programına ilişkin görüşlerini belirlemektir. Öğretmen adaylarının görüşleri öğrenme süreç modeliyle incelenirken, modelin farkında olmama, farkındalık, anlama, bağlılık, uygulama ve yansıtma şeklinde altı aşaması dikkate alınmıştır. Olgu bilim desenine dayalı araştırmanın çalışma grubunu, Siirt Üniversitesi Eğitim Fakültesinde öğrenim gören 35 öğretmen adayı oluşturmaktadır. Açık uçlu anket formunun kullanıldığı araştırmada verile, nitel program yoluyla analiz edilmiştir. Analizlerde içerik analiz yöntemi kullanılmıştır. Araştırma sonucunda; Çift Anadal Programıyla ilgili katılımcıların öğrenme süreç modeli basamaklarını kullanarak görüş belirtikleri görülmüştür. Bu görüşlere sahip katılımcıların, Çift Anadal Programı hakkında bilgi sahibi olmadıkları ve farklı bölümler ile ilgili bilgileri öğrenmeye istekli görünmedikleri sonucuna ulaşılmıştır. Sonrasında Çift Anadal Programına kayıt yapınca farkındalıklarının geliştiğini, öğrenmeye istekli olduklarını belirtmişlerdir. Katılımcılar aynı zamanda merak ve keşfetme duygusuyla, diğer bölümlerin ders içeriklerini sorgulamışlar ve iki diplomanın onlara sağladığı imkânları açıklamışlardır. Çift Anadal Programına olumlu bakış açısıyla yaklaşan katılımcılar buna karşın değerlendirme sürecinin olumsuz yönlerine değinmişlerdir. Öğrenme süreç modelinin en son aşamasında ise değerlendirmede daha çok öz değerlendirmenin katkılarına vurgu yapmışlardır. Genel olarak sonuçlar özetlenirse; öğrenme süreç modelinin farkında olmama aşamasında Çift Anadal Programı hakkında katılımcıların hazırbulunuşlulukları bulunmamaktadır. Farkındalık aşamasında katılımcılar, programdaki ders içeriklerinden dolayı, bir çeşitliliğin olduğunu görmektedir. Anlam aşamasındaki görüşlerde katılımcılar, programa çok yönlü bakış açısıyla yaklaşmaktadır. Bağlılık aşamasında katılımcılar, süreç ve sonuç değerlendirmenin zorluklarından bahsetmektedir. Uygulama aşamasında, farklı bölümlerde eğitim görmenin faydalarına değinmekte ve zaman yönetimi konusunda kendilerini değerlendirmektedir. Bu aşamada, özellikle katılımcılar özedönük zekalarını kullanarak kendilerinin olumlu ve olumsuz yönlerine eleştirel bir şekilde yaklaşmaktadır. Yansıtma aşamasında ise, katılımcılar ölçme ve değerlendirme olanaklarına değinmektedirler.

Anahtar Kelimeler: *Öğrenme, Öğrenme Süreç Modeli, Çift Anadal, Yan Dal Programı*

Genişletilmiş Özet

Problem: Öğrenme süreç modeli, öğrenci davranışlardaki değişimi aşama aşama açıklayan bir anlayışı benimsemektedir (Yamaguchı, Takemorı ve Takadama, 2013). Bu anlayış çerçevesinde model altı aşamadan (farkında olmama, farkındalık, anlam, bağlılık, uygulama ve yansıtma) oluşmakta ve aşamalar örgütsel öğrenme döngüsünün temellerini oluşturmaktadır. Örgütsel öğrenmede, yöneticilerin değişimi desteklenmekte, bilişsel olarak gelişimleri sağlanmakta, örgütlerin sürekli değişim ve iyileştirmelere gidilmesi gerektiği vurgulanmaktadır. Değişimler ve iyileştirmelerde teknolojik ilerlemeler bir başvuru kaynağı olarak görülmektedir (Yeo, 2005). Öğrenci ve öğretmen bu kaynakları altı aşamada sürekli olarak sorgulamaktadır. Sorgulama işleminde; odaklanma, çevre ve teknik (Maidin ve Hamzah, 2010) gibi üç bileşen dikkate alınmaktadır. Bu bileşenlerin temeli, aynı zamanda öğrenme süreç modelinde oluşmasına katkı sağlayan öğretilen ve keşif modeline dayalı olmaktadır. Her iki modelinin ortak yönü "çevre, öğretmen, öğrenci"dir. Mesela öğretilen modelde elde edilen bilgiler araştırılmakta, bunlar gözlenebilir davranışa dönüştürülmektedir (Saraceni ve Júnior, 2012). Kazandırılan davranışlarda öğretmen belirliyici bir faktör olarak görülmektedir. Keşif modelde ise, birey problem çözme becerisini kazanmaktadır. Birey karşılaşılan problemlere çözüm üretmekte, yeni bilgiler keşfetmekte, davranışına bunu yansıtmakta, benzer problemlerin çözümünde kullanmaktadır. Bu yönüyle modelin öğrenci merkezli eğitime uygun olduğu belirtilmektedir (Buckler, 1996).

Çağdaş eğitim anlayışında kullanılması önerilen modelde, öğretmen farkında olmama, farkındalık, anlam, bağlılık, uygulama ve yansıtma aşamalarını kullanarak sınıf içi ve dışı uygulamalar konusunda öğrenci görüşlerini alabilmektedir. Tabi her aşamanın kendi içinde özellikleri bulunmaktadır. *Farkında olmama aşamasında*, öğrencinin şemasında öğreneceği konu hakkında önceden bir bilgi bulunmamaktadır. Öğretmen bunu farkettiğinde, öğreteceği her türlü bilginin öğrenci için anlamlı olmasını sağlamalı ve bu konuda öğretim ortamını düzenlemelidir. Eğer öğretmen bu şekilde bir anlayışa sahip olmazsa, öğrenci yapılacak etkinliklere istekli katılım göstermeyecektir. *Farkındalık aşamasında* öğrenci bir konuyu anlamak ve araştırmak için gayret göstermektedir. Gösterilen gayret, öğrencinin yaşam boyu öğrenmesinde motivasyonunu olumlu yönde etkilemektedir. *Anlama aşamasında,* öğrenciden öğrenme konusunda daha fazla performans göstermesi beklenmektedir. Çünkü bu durum anlamlı öğrenme için önemli görülmektedir. *Bağlılık aşamasında,* sentez düzeyinde davranışların temelleri atılmaktadır. Burada eski bilgilere yeni bilgiler eklenmektedir. *Uygulama aşamasında,* teorik bilgiler somut olarak davranışa dönüştürülmektedir. Öğrenci bu aşamada, kendi eksiklerini görebilmekte ve bunları tamamlamak için farklı uygulamalara başvurabilmektedir. Son olarak *yansıtma aşamasında,* süreç ve sonuç değerlendirme yapılarak öğrenci öğrenme konusunda genel bir görüşe sahip olmaktadır. Öğrenme süreç modelinin en son aşaması aslında öğrencinin geçmiş ve gelecek öğrenmeleri konusunda kararlar almasını sağlamaktadır. Yani öğrenci, geçmişte öğrendikleri hakkında fikir sahibi olmakta, nasıl öğrendiğini sorgulamakta ve neler öğrendiğini bilmektedir. Böyle bir bakış açısı, öğrencinin karar verme, eleştirel düşünme ve diğer üst düzey becerilerin gelişmesine katkı sağlamaktadır.

Öğrenme süreç modeli, öğrenen merkezli olduğundan, öğrenciye disiplinler arası bakış açısı sunmaktadır. Böyle bir bakış açısı, özellikle üniversitelerde uygulanan programlarda görülmektedir. Örneğin 1998 yılından bu yana Türkiye'de uygulanan Çift Anadal Programıyla öğrenciye iki lisans diploma hakkı verilmektedir (Şahin ve Öztürk, 2020). Bu programın genel özelliğine bakıldığında, disiplinler arası çalışmayı gerektirdiği ve bireyin birçok beceriye sahip olması amaçlandığı ifade edilmektedir. Ayrıca Çift Anadal Programıyla, üstün başarılı öğrencilere ikinci bir diploma imkânı sunulmakta, öğrenciler ihtiyaç duyulan alanlara yönlendirilmekte ve istihdam sağlanmaktadır (Temizyürek ve Derelioğlu, 2004). Kısaca Çift Anadal programıyla öğrenciler diğer bölümlerdeki öğretim süreçlerinden yararlanmaktadır (Hopcan, Polat ve Adıgüzel, 2014). Bütün bu süreçlerde öğrenci "farkındalık" bilinciyle hareket ederek, Çift Anadal Programının olanaklarından yararlanmaktadır. Programla, öğreneceği bilgilerin kısa süreli eğitim yaşamına değil, uzun vadeli hizmet sonrasındaki yaşamında da etkili olacağını bilmektedir. Buradan hareketle, öğretmen adaylarının Çift Anadal Programına ilişkin görüşlerinin öğrenme süreç modeli ile incelenmesi araştırmanın problem cümlesini oluşturmaktadır.

Yöntem: Araştırmada nitel araştırma modellerinden olgu bilim kullanılmıştır. Olgu bilim deseninde belirli olgulara odaklanılmakta ve derinlemesine bir anlayışa sahip olunmaktadır. Bu olgularla ilgili bireyin

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duyguları ve düşünceleri ortaya konulmaktadır (Yıldırım ve Şimşek, 2013). Yapılan bu araştırmada öğretmen adayların Çift Anadal Programı konusundaki görüşleri öğrenme süreç modeli ile ele alınarak incelenmiştir.

Araştırmanın çalışma grubunu, 10'u erkek, 25'i kız öğretmen adayı oluşturmaktadır. Katılımcılara araştırmacı tarafından geliştirilen açık uçlu formu uygulanmıştır. Açık uçlu anket formunda yer alan sorular için uzman görüşü alınmıştır. Soruların anlaşılırlığı ve kapsamı doğrultusunda çeşitli düzenlemeler yapılarak form öğretmen adaylarına 20 dakika sürede uygulanmıştır. Buradan elde edilen veriler, içerik analizine tabi tutulmuş ve analizlerde belirli aşamalar dikkate aınmıştır. İlk olarak katılımcıların görüşlerinin yer aldığı kâğıtlar, 1'den 35 kadar sıralanmıştır. Sıralanma sonrasında kâğıtlar, araştırmacı tarafından okunmuş ve kodlanmıştır. Kodlamalar kod listesine kaydedildikten sonra belirli temalar altında toplanmıştır. Temalar, önceden alınyazında Buckler'in belirtmiş olduğu basamaklar dikkate alınarak oluşturulmuştur. Araştırmanın güvenirliğini sağlamak adına kodların ve temaların uygunluğu konusunda uzman görüşüne başvurulmuştur. Araştırmacı ve uzman görüşü için Miles ve Huberman'ın (1994) güvenirlik formülü kullanılmıştır [Güvenirlik=görüş birliği/görüş birliği +görüş ayrılığı)]. Formülden elde edilen sonuçta, güvenirlik .94 bulunmuştur. Son olarak, temalar araştırmacı tarafından gözden geçirilmiş ve bulgular bölümünde yorumlanmıştır. Bulgular bölümünde katılımcı görüşlerinden doğrudan alıntılar yapılmış ve alıntılar yapılırken katılımcılar için C_1, C_2, C_3.... C_{35} kodları kullanılmıştır.

Sonuç: Çift Anadal Programına ilişkin katılımcı görüşlerinde altı tema oluşturulmuştur. Bunlar; farkında olmama, farkındalık, anlam, bağlılık, uygulama ve yansıtma'dır. Farkında olmama teması; koşulları anlamama, disiplinli çalışmanın önemini bilmeme, ilgi duymama, dikkat çekmeme ve programlar arası seçimi bilmeme şeklinde alt temalardan oluşmaktadır. Bu temalar içerisinde en çok dikkat çeken görüşler, katılımcıların okudukları bölümler hakkında bilgi sahibi olmamasıdır. Yani katılımcılar, Çift Anadal Programındaki diğer bölümlerin ders içerikleri hakkında yeterli ön bilgilerinin olmadığını ifade etmektedir. Katılımcıların ön bilgilerinin olmaması, Çift Anadal Programına başvurularının az olmasına neden olmaktadır. Bunun yanı sıra katılımcılardan bazıları, okudukları bölümlerin öğretmen atamalarında kontejanlarının yeterli alım yapmamasına dikkat çekmektedir. Böyle bir durum katılımcıların, başka bir bölümde Çift Anadal yapması konusunda motivasyonunu düşürmektedir. Motivasyonu düşen katılımcılar, yakın çevresinde özellikle arkadaş ortamında programla ilgili konuşmaların dikkatlerini çekmediğini belirtmektedir.

Farkındalık teması; ilk sorgulama, sorumluluğun artması, iş imkânın genişliği, eski-yeni bilgi farkındalığı, koşulları sağlama ve eğitim çeşitliliği şeklinde alt temalardan oluşmaktadır. Bu temalardan hareketle katılımcıların, Çift Anadal Programının eğitimde çeşitlilik sağladığı görüşüne daha fazla katılım gösterdikleri sonucuna ulaşılmıştır. Katılımcıların çeşitlilik olarak ifade ettikleri görüş, Çift Anadal Programının farklı bölümlerde kendilerine okuma imkanını sunmasıdır. Farklı bölümlerde derslerin olması onların gelecekte olaylara çok yönlü bakmasını sağlamaktadır. Çünkü katılımcılara göre bir öğretmenin olaylara çok yönü bakması gerekmektedir. Sorgulama, araştırma ve deneyim bu bakış açısının sonucunda oluşmaktadır.

Anlam teması; programların ders içeriklerini sorgulama, bilgileri transfer etme, uygulamaya dökmek, iki diploma imkânı, farklı bakış açısı sunma, çift anadal kavramını açıklama, sebep-sonuç ilişkisi kurma ve yeni programları keşfetme şeklinde alt temalardan oluşmaktadır. Böylelikle katılımcıların anlam teması altında en fazla Çift Anadal Programıyla farklı bakış açılarına sahip oldukları, iki diploma aldıkları, yeni bölümleri keşfettikleri ve çift anadal kavramını açıklayabildikleri görüşüne sahip olduğu görülmektedir. Çift Anadal Programı konusunda görüş sahibi olduktan sonra katılımcılar, diğer bölümlerde eğitim görmenin onlara katkı sağlayacağını ve anlamlı öğrenmenin gerçekleşeceğini belirtmektedir.

Bağlılık teması; derinlemesine öğrenme, daha fazla bilgi, değerlendirme sürecinin yorucu olması, farklı ortamlarda kendini ifade etme, arkadaşlarla birlikte sınavlara çalışma, yeni şema, analiz etme, öğrenmeye açık olma ve gelecek planlara ulaşma şeklinde alt temalardan oluşmaktadır. Katılımcılar bu temalardaki görüşlerinde genel olarak; farklı iki programın sınavlarına hazırlanırken bilişsel yorgunluk yaşadıklarını, buna karşın yakın ve uzak hedeflere ulaşmada Çift Anadal Programının etkili olduğunu belirtmektedir.

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Uygulama teması; iki farklı programda okuma ve çift anadal yapma; yansıtma teması ise deneyim, içselleştirme, sentez davranışlar, eleştirel düşünme ve değerlendirme şeklinde alt temalardan oluşmaktadır. Böylelikle katılımcıların bu temalarda genel olarak; Çift Anadal Programının onlara seçenek sunduğunu, akran ve öz değerlendirme yaptığını ifade etmektedir.

Öneriler: Araştırma öğretmen adayları üzerinde gerçekleştirilmiştir. Araştırmanın sonuçları farklı bölüm ve fakültelerde çift anadal yapmakta olan öğrencilerin görüşleri alınarak karşılaştırmalı olarak tartışılabilir. Çift Anadal Programı ile ilgili karşılaşılan sorunlar karma çalışmalarla belirlenebilir. Çift Anadal Programının öğretmen adaylarının mesleki becerilerine katkısı konusunda nitel çalışmalar yapılabilir. Üniversite öğrencilerinin Çift Anadal Programına ilişkin görüşleri farklı model ve adımlarla belirlenebilir. Öğrenme Süreci Modeli adımları göz önüne alınarak, üniversite öğrencilerinin Çift Anadal Programına ilişkin görüşleri nitel ve nicel araştırmalarla belirlenebilir.

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