

THE CULTURAL FUNCTION OF THE LIFE SCIENCES COURSE IN THE 2000's

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INTRODUCTION

The family is the first environment where individuals meet life. Individuals acquire many vital information needed to adapt to social life in these environments. Individuals learn their native language, culture, traditions, and many other social structures in the family. As social beings, individuals perform their first socialization activities in the family. From this point of view, the family is the first educational institution in individuals' life. After the family, the social environment in which individuals live mostly is schools. Schools are one of the most important socialization areas of today's world, where peers come together.

Starting their school life, young individuals learn basic information from various courses, especially in elementary schools. The most important ones in Turkey are Turkish, math, and life sciences. While Turkish aims to provide students with the details of linguistics, and math aims to provide students with numerical competencies, the life sciences aims to provide students with life knowledge in all aspects. As the name suggests, life sciences is the science of life itself. It is all of the knowledge, skills, and behaviors that will prepare individuals for social life and make their life easier. The life sciences course can be considered as the continuation of the basic life skills and knowledge patterns that individuals begin to learn in the family. However, individuals sometimes acquire undesirable behaviors because of random learning in the family. They incorporate these informal learnings that are far from a certain format into their own lives. Thanks to the life sciences course, the knowledge that is aimed to be attained by the student is given with a systematic and specific program. In this context, the life sciences course is a life preparation guide for individuals.

The life sciences course gives children the opportunity to consider life as a whole, to understand and make sense of events. In addition, it helps them to know themselves and their environment in all aspects. It brings awareness about the meaning of the rules that are accepted by society and about the chaos that can be experienced in the absence of rules. From this point of view, the life sciences course undertakes the mission of bringing up good citizens and adaptable individuals.

Culture in general refers to the whole way of life and thinking of a society. The most fundamental factor that makes societies different from each other is culture. In a sense, culture is the identity of a society. Culture is a very broad concept. Different disciplines have evaluated the many interrelated elements of culture as a whole. In addition, culture has a defining characteristic but also has a limiting task. Culture draws boundaries on how individuals should behave in society since behaviors that are not appropriate for the cultural structure are condemned by society. In this case, individuals who do not want to be excluded from society tend to conform to social norms in general. Therefore, culture makes certain behaviors and mentalities necessary, even compulsory.

In this section, the cultural function of the life sciences course and curricula are emphasized and general information is presented.

1. Definition, Purpose, Scope, and Content of the Life Sciences Course

Life Sciences is a course included in the 1st, 2nd, and 3rd grade curriculum of elementary schools in Turkey. In terms of weekly hours, it is one of the three most taught courses along with Turkish and math. Life sciences is taught four hours a week in the 1st grade, four hours a week in the 2nd grade, and three hours a week in the 3rd grade (MEB, 2020). The subjects in the life sciences course are structured with concrete facts whenever possible and from the close environment of the students such as their homes, families, schools, and peers in accordance with their lives (Kabapınar, 2019). The fact that the subjects are related to life and presented in a concrete way in accordance with the development of elementary school students helps students better structure their life experiences. From this point of view, the purpose of life sciences is to enable young individuals who do not fully know life yet to acquire life skills and use them in their lives since life sciences guides children in this wide world (Talim Terbiye Kurulu, 2005:22). Contributing to the child's adaptation to the social environment in which he/she lives and taking into account the psycho-social development of the child, student-centered life sciences is one of the important courses in basic education that incorporates different disciplines, teaches information to the child by learning by doing, and prepares them for their next level of education (Tay & Yıldırım, 2013; Ocak & Beydoğan, 2005). With its scope, it actually provides basic information to many courses. While life sciences is a starting point for Turkish, math, music, arts, physical education in the first three years of elementary school, from 4th grade onwards, it leaves its place to other courses such as science (3 hours), social studies (3 hours), human rights, citizenship and democracy (2 hours), and traffic safety (1 hour) (MEB, 2020) and guides them in terms of content (Gültekin & Gündoğan Çögenli, 2014).

Planned in line with the understanding of collective teaching in education, life sciences was designed for children to get to know themselves, the society they live in, and the world, and to perceive life as a whole (MEB, 2009). According to Bektaş (2007), thanks to life sciences, children have the opportunity to get to know the natural and social environment they live in, and the characteristics of their peers and themselves. In addition,

children learn how, where, and to what extent the various materials that they own or around them can be used and gets the opportunity to improve their life with the use of these materials (Şahin, 2009). Kabapınar (2012) argued that in life sciences students can acquire basic scientific knowledge, and acquire the skills necessary to solve the problems they encounter, to establish healthy relationships with other people in their lives, and to take on life responsibilities.

Developing the biological, social, and cognitive zones of development (Tay & Yıldırım, 2013; Karabağ, 2006) and establishing a ground for the knowledge that children will acquire throughout their life with a structure that includes social, artistic, and intellectual values (Acat, Anılan, Girmen, & Anagün, 2005) are among the objectives of the life sciences. While the life sciences curricula aim students to get to know the nature and society in which they live, to adapt to these environments effectively, and to be physically, spiritually, and mentally strong, the main purpose is to help students acquire basic skills and values related to life and contribute to their personal and social development (Avcı & Kayabaşı, 2017). Furthermore, the life sciences course aims for children to become individuals who adapt to the society they live in, help them learn the historical, cultural, and social structure of the society they live in, and acquire the behaviors required by social life (Bahçe, 2010). With life science, children learn the rules of school and classroom, the rules necessary for living in harmony in the society, the respect and honesty of individuals towards each other, cooperation, contribution, and democracy. With this course, which is a reflection of real life, children make predictions for the solutions of possible problems they may encounter throughout their lives, learn to produce original solutions as a result of generalizations and analyses they make (Bahçe, 2010), develop themselves, think multi-faceted and creatively, and attain skills such as problem-solving using high-level cognitive and affective characteristics. As can be seen, the most fundamental task of life sciences is to provide students with the necessary basic knowledge and skills and to introduce their immediate environment to them. Considering that culture, which is the most distinctive element of societies, cannot be separated from life, the concepts of life sciences and culture are two parts that are very close to each other and even complement each other. This gives life sciences a cultural function because while life sciences introduces the students' immediate environment and social life to them, it cannot do this independently of cultural elements. On the contrary, life sciences presents the general rules and characteristics of society and social life to the students by using culture. While doing this, life sciences realizes cultural transmission.

2. Brief introduction of life sciences curricula in the 2000s (2005, 2009, 2015, 2018) and their learning objectives

The life sciences curriculum includes the course learning objectives, values, competencies and skills of elementary school 1st, 2nd, and 3rd grade students, the educational process, and the measurement and evaluation activities to be used in this process (Köse-Çengelci, 2014). Comprehensive works were initiated in 2004 in order to develop a curriculum

based on the constructivist approach that gained momentum in Turkey towards the 2000s. The reasons for these curriculum development works were the developments in the information society, the learning understanding developed within the framework of the lifelong learning approach, and the compliance with the European Union norms. With the 2005 curriculum, which was developed as a result of these curriculum development works, the behaviorist approach was replaced with the constructivist approach (Şahin, 2009). Especially with the effect of both the constructivist approach and social and technological developments, the curricula developed after the 2000s had significant differences from the curricula developed before the 2000s. Since 2000, four curriculum changes were done, in 2005, 2009, 2015, and 2018. The 2005 Elementary School Life Sciences Curriculum included the curriculum's vision that was made up of the course's goals, curriculum's basic approach and structure, skills, special goals, teaching process, and measurement and evaluation. The curriculum stated that man is both the subject and the object of change as a whole with its biological, psychological, social and cultural aspects (MEB, 2005). The content given with this curriculum was developed for the first time based on learning domains and the thematic approach, unlike the previous curricula. Different from the previous curricula, to present the course content, three learning domains were determined, namely "The individual", "The society" and "The nature" (Şahin, 2009). The themes of the 1st, 2nd and 3rd grade life sciences were determined as "My School Excitement", "My Unique Home", and "Yesterday, Today, and Tomorrow" (MEB, 2005). The 2005 Elementary School Life Sciences Curriculum aimed to develop students' skills such as critical thinking, creative thinking, research, communication, problem-solving, using information technologies, providing security and protection, and self-management. In addition to these skills, the curriculum planned to help students develop personal qualities and values such as self-respect, self-confidence, collectivism, patience, tolerance, love, respect, peace, benevolence, truthfulness, honesty, justice, openness to innovation, patriotism, and protection and development of cultural values. With this curriculum, unlike the previous curricula, an understanding that takes into account the process in measurement and evaluation, as well as the result, was adopted by paying attention to the "alternative" assessment approaches based on the constructivist learning theory. The transition to this assessment approach emerged as a result of the preference for the constructivist approach in the curriculum (Beyaztaş, Kaptı, & Senemoğlu, 2013).

The 2009 Life Sciences Curriculum included the themes of "My School Excitement", "My Unique Home", and "Yesterday, Today, and Tomorrow", which were common to the 1st, 2nd, and 3rd grades and were the same as the 2005 curriculum. The themes in the curriculum show that the learning domains and thematic approaches used for the first time with the 2005 program continue to be used in this curriculum as well. The vision of the new curriculum was to raise happy individuals who enjoy the learning activities, are at peace with themselves, their social environment and nature, have basic knowledge, life skills and the equipment required by the age, and can adapt to change (MEB, 2009). Very similar to the 2005 Elementary School Life Sciences Curriculum, the 2009 curriculum did not include general goals and behaviors, unlike the 2005 curriculum, but included

learning objectives. These learning objectives were developed to integrate with the determined themes. In the program, whose primary goal was for students to acquire basic life skills, although the skills in the 2005 curriculum were not changed, skills such as entrepreneurship, using Turkish correctly, effectively and beautifully, recognizing the basic concepts of science, and recognizing the basic concepts related to themes were added to the 2009 curriculum, (MEB, 2009). These newly added skills aimed students to attain the skills of using information technologies and entrepreneurship.

The 2015 Elementary School Life Sciences Curriculum included the vision, goals, skills, values, organizational structure, measurement-evaluation, explanations regarding the implementation of the curriculum, and expectations from teachers. The vision of the curriculum was to raise individuals who have basic life skills, know themselves, lead a healthy and reliable life, are sensitive to nature and the environment, research, have high self-confidence, are at peace with their environment and themselves, and internalize national and spiritual values (MEB, 2015). While the statements of “who enjoy learning” and “who are flexible enough to adapt to changes dynamically” from the 2009 curriculum were not included in the 2015 curriculum, the statement of “who have high self-confidence” was included in the 2015 curriculum (Tay & Baş, 2015). In the program, there were 14 general goals that were reflected in the learning objectives in line with the general goals and basic principles of Turkish National Education. The stages of planning general goals and learning activities and developing teaching materials should be assessed in integrity (MEB, 2015). The organizational structure of the curriculum covered the courses’ goals, basic life skills, concepts and values, units and learning objectives (Güven & Kaymakçı, 2016). Used in the contents of the 2005 and 2009 curricula, the thematic approach was replaced by a unit-based approach in 2015. In all three grade levels, six units were determined. There were “Me and My School”, “My Family and Home”, “Healthy Life”, “Safe Life”, “I Love My Country”, and “Nature and Environment”. Although it was not clearly stated that the content was planned in line with the spiral approach, some of the learning objectives were repeated in the upper classes. It is noteworthy that the curriculum, which included 22 skills and 20 values in total, was simplified compared to the curricula implemented in previous years. The removal of the activity examples from the curriculum is another indicator of this simplification.

Finally, the 2018 Elementary School Life Sciences Curriculum includes the course’s goals, skills, the points to be considered in the implementation of the curriculum, the structure of the program, the dimensions of the textbook, and the learning objectives and their explanations (Aktay & Çetin, 2019). The main goal of the curriculum is to raise individuals who have basic life skills, know themselves, lead a healthy and reliable life, absorb the values that are the treasures of the society they live in, are sensitive to nature and the environment, research, produce and love their country. In line with this goal, the 14 general goals, which were also included in 2015, are also specified in the 2018 program and are reflected in the learning objectives. The values expressed in the 2015 curriculum are called the root values in the 2018 curriculum, and many of the values

focus on basic values instead of “giving”. These root values are “justice, friendship, honesty, self-control, patience, respect, love, responsibility, patriotism, benevolence” (MEB, 2018). The “Competences” section, which was not included in the curricula before, is included in the 2018 curriculum for the first time. The “Turkish Qualifications Framework (TQF)”, the range of skills that students need in their lives, was developed to realize our education system’s aim of raising individuals with knowledge, skills, and behaviors integrated with competencies. Designed to be compatible with the European Qualifications Framework, the TQF refers to the national qualifications framework that shows all the qualification principles gained through vocational, general, and academic education curricula, including primary, secondary and higher education, and other learning ways (MYK, 2021). These competencies in the TQF are “communication in the native language, communication in foreign languages, mathematical competency and basic competencies in science/technology, digital competency, learning to learn, social and civic-related competencies, taking initiative and entrepreneurship, cultural awareness and expression” (MEB, 2018). Unlike other previous curricula, the measurement and evaluation approach in the 2018 life sciences curriculum is explained in detail. Since no one is exactly the same as another, it is against human nature to design the curriculum and the measurement and evaluation process “appropriate for everyone”. Therefore, it is necessary to act with maximum diversity and flexibility in the measurement and evaluation process. Due to individual differences, it is not appropriate to talk about a universal and uniform measurement and evaluation method for all students. Because of the individual or cultural differences of each student in the classroom, measurement and evaluation activities should be carried out by taking these differences into account. In today’s world, societies increasingly host more than one culture together. This brings multiculturalism with it. This cultural richness is also reflected in classrooms. Thus, at the end of the course, it cannot be assumed that every student attains the same learning objective equally. Therefore, different measurement and evaluation activities are needed for students from different cultures.

3. What is culture?

The concept of culture has a very broad scope in its essence because a society’s language, thought, dressing, eating and drinking, games, behavior patterns, habits, and almost everything about life reflects the culture of that society. This wide scope of culture made it difficult to come up with a definition of culture that everyone agrees on. Thus, there are different definitions in the literature. According to DiStefano and Maznevski (2000), culture is the assumptions and norms determining how individuals in a society will interact with each other and what ways they will follow in their work. According to Hofstede (1980), it is common sense that differs one group from another. Human-made, culture has man at its center and is the totality of the individual who is an integral part of the society (Yalçınkaya, 2016). Culture also refers to the basic characteristics belonging to a particular social group and distinguishing this group from other groups. This means that different groups have different cultures (Yeşil, 2011). Many different definitions can be

added to these definitions. When the definitions of culture are examined, it is seen that all these definitions of culture include a society's abstract or concrete symbols encompassing all the descriptive elements of that society. Based on the aforementioned characteristics, culture can be defined as the sum of the emotions, thoughts, behaviors, and values which distinguish a group or society that has preferred to live together under the influence of a certain binding element such as religion, language, or race, from other groups or societies.

4. The importance of culture

As mentioned before, culture is the sum of emotions, thoughts, behaviors, and values of a society. In other words, culture is a dynamic social structure. It is passed down from generation to generation and changes over time. It is not innate, on the contrary, the individual is cultured by going through experiences after birth. First interacting with the family after birth and then interacting with the immediate environment, the individuals learn how to behave, speak and think in society in this process. The norms that are appropriate in their culture direct individuals' behavior. According to Mutlu (1999), culture is shared by all members of the society, is limiting, symbolic and consists of parts that complement each other. In this context, in order to understand individuals' thoughts, emotions, behaviors, and values, it is necessary to first understand individuals' culture since culture directs individuals' emotions, thoughts, behaviors, and values, and the individuals even act according to the culture without even being aware of it. Another important aspect of culture is that it helps foresight. Shared by all members of the society, culture also helps determine how these members will react to a particular event.

Culture makes itself felt in almost every aspect of life. This gives culture an encompassing characteristic. Yeşil (2011) stated that there is almost no area in human life that culture does not affect, and it is a very important phenomenon in this respect. White (1999) argued that individuals with similar cultural backgrounds understand each other much better and try to interact more. Similarly, many authors (Mead, 1998; Mutlu, 1999; Stephens & Greer, 1995) stated that the importance of culture is undeniably great in evaluating and interpreting people, in interpersonal relations, and in many social, economic, and political areas.

5. The Relationship Between Life Sciences and Culture

Life sciences help students to adapt to their environment by recognizing and improving themselves. According to Binbaşıoğlu (2003), life sciences provide important contributions to the students' adaptation to social life. Binbaşıoğlu (2003) argued that life sciences is the first course that enables children to adapt successfully to the environment they live in. From this point of view, it can be said that the life sciences course is the most appropriate course to transfer student experiences to the classroom because the subjects of this course are based on man, nature, and society. As it is often emphasized above, the concept of culture is in a very close relationship with life itself. Therefore, culture exists wherever

people, nature, and society exist. Again, as stated above, culture directs how individuals should think and behave. In short, it helps individuals to adapt to their environment in the first degree. When evaluated from this point of view, it can be stated that the life sciences course and the phenomenon of culture are closely related to each other and that these two elements are even in need of each other.

With subjects in life sciences, the cultural codes of the society are transferred to the students. In addition, students come to the classroom with their cultural backgrounds. From this point of view, life sciences and cultural codes complement each other. The sense of totality here does not mean the total, it indicates the harmony and accord of the parts that make up the total. As Sönmez (1998) stated below, life sciences is a discipline that includes many elements reflecting the culture of the society.

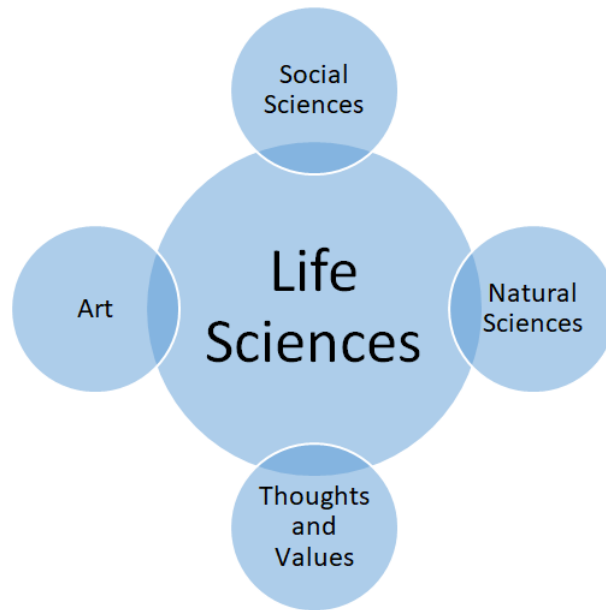


Figure 1: Scope of Life Sciences (Sönmez, V. (1998). Hayat Bilgisi öğretimi ve öğretmen kılavuzu, Anı yayıncılık.)

Culture is the general habits and lifestyle of a society. One of the important tasks of culture is to create social unity by ensuring harmony between individuals. In societies with a strong culture, national consciousness and solidarity are at a high level. In this sense, culture directs the future of both individuals and society and shapes the lives of individuals. In a way, culture shapes social life. In summary, culture is everything that concerns life. Arıbaş and Yılmaz (2004) defined life sciences as “a course of life”.

Therefore, it can be stated that culture and everything related to culture is within the scope of the life sciences course. In addition, many cultural elements are within the content of the course. In summary, life sciences has a very important function in the transmission of culture and the cultural elements that will be presented to elementary school students can be easily given with this course.

6. Result

The examination of life science curricula that were put into practice in Turkey in the 2000s reveals that cultural awareness is not given much place. The 2005 curriculum stated that the individual is a whole with social and cultural aspects as well as being a biological entity. For this reason, life sciences is sensitive to cultural differences. The 2009 and 2015 curricula emphasized greatly and included expressions that assimilate the lifestyle of the society such as protecting and developing cultural values and internalizing national and spiritual values. These social values continued to be emphasized in the 2018 program as well. Also with this curriculum, the cultural aspect of life sciences curricula was put forth with expressions such as “communication in the native language and foreign language” and “cultural awareness” in the TQF. Another important point is that the measurement and evaluation activities in the 2018 program are planned in line with diversity. Accordingly, measurement and evaluation activities should be carried out based on cultural diversity considering the fact that not every student in a classroom is a copy of each other. In today’s world, communication is versatile and intense. Thanks to this characteristic of communication, the meeting and mingling of cultures are faster and more intense than ever before. For this reason, the curriculum and content of life sciences which is the course of “life” should be updated in accordance with the times in order to increase its cultural function.

As a result, very closely related to each other, life sciences and culture cannot be considered separately from each other, and the lack of one leaves the other incomplete because life sciences introduces life to students, and culture is life itself. In short, the life sciences plays an important role in the transmission of culture. For this reason, cultural elements should be given much more space within the scope of life sciences.

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