

Holistic View of Educational Sciences

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CHAPTER II

21st Century Skills and Values Education

Okan SARIGÖZ¹

Introduction

The cycle and values education, with its focus on technology conservation, problem-solving, communication, cooperation, and critical thinking, are crucial elements for success in the 21st century. Values education centers upon fostering character development, ethical principles, and a sense of social responsibility. The relationship between these areas is evident in their emphasis not only on technical skills but also on ethical values and social responsibility. It is essential to strengthen cooperation and collaboration through values such as tolerance, empathy, and respect. In the 21st century, knowledge and value education emphasizes not only the development of knowledge and technical skills but also the development of an ethical perspective and human-oriented values. Critical thinking combined with values such as honesty and fairness can help to analyze ethical issues and make the

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right decisions. The ability to be creative and productive can also be effective in addressing social problems on the basis of ethical values. This approach promotes individual achievement and contributes effectively to social well-being and justice. In the 21st century, sustainability and values education are intertwined. It is not only about technical knowledge and skills but also about ethical behavior and social responsibility. In a fast-paced world, it is crucial to contribute to social well-being. Values education in the 21st century involves not only endowing individuals for business success but also positively influencing communities and the world. This approach contributes to a sustainable society by enabling technical developments and human-centered values. Furthermore, value education in the 21st century focuses on students' responsibility to read, use, and share accurate information. This, combined with skills such as media literacy and information management, creates a healthier communication environment by preventing the transfer of misinformation. Productivity and value education aims to ensure well-being, social progress, and effective participation in the information society, enabling students to take part responsibly and contribute effectively to the production process.

1. 21st Century Skills

Rapid technological advancements have led to significant transformations in various domains, ranging from everyday life to the realm of business. In the century in which we currently reside, it is observable that this ongoing cycle of transformation has indeed become a prevailing reality (Castells, 2010). In light of this reality, the technological advancements witnessed in the 21st century have notably impacted the interests, desires, and demands of society, thereby reshaping economic, social, and daily life dynamics. This

rapid advancement has resulted in the swift dissemination of information, the emergence of novel social networks, and the influence of social anxiety across multiple domains, encompassing both work and education. The advent of the Internet has transformed the accessibility of information, rendering it more convenient and expeditious compared to previous methods, and as a result, the perception that information is time-consuming and difficult is changing. Hence, there arises a necessity for an education system capable of accommodating and responding to this technological shift.

As the demands of society evolve, it becomes imperative for the education system to adapt accordingly, emphasizing the vital importance of the restructuring process (Milli Eğitim Bakanlığı [MEB], 2011). During the early 2010s, numerous prominent associations and corporations based in the United States, including the National Education Association, and American Association of School Librarians, as well as companies such as Lego, Microsoft, Pearson, ETS, HP, Apple, Intel, Dell, Crayola, and Cisco collaborated on an initiative aimed at highlighting and cultivating 21st century skills. The initiative was outlined through a comprehensive summary product released by the Department of Defense Education Activity (DODEA) in 2014. This framework centers on three primary themes: learning and innovation skills, life and career skills, and literacy (information and media) skills, along with the various skill sets encapsulating these themes. These endeavors signify an important step toward formulating an appropriate education and training paradigm for the 21st century (Partnership for 21st Century Skills, 2008).

Education assumes a fundamental role in our lives, serving as a primary endeavor that enables students to acquire skills appropriate to their age and stage of development. The National Education Basic Law No. 1739 encapsulates the principles governing the education system and underscores the imperative for individuals to grasp the essence and purpose of education. The human profile targeted by Turkish National Education is defined in the context of self-realization as a multi-dimensional (mind, body, morality, emotion, and spirit) individual (Yavas et al., 2021). It seems that various efforts are being made today to create a new paradigm in the education system. In light of this initiative, education systems aspire to ensure that students not only attain cognitive skills such as literacy and numeracy but also cultivate 21st century skills, which are deemed essential for enhancing their critical thinking abilities, learning methodologies, and overall quality of life (Orhan-Goksun, 2016).

Moving forward, education is expected to change its emphasis, moving towards fostering interdisciplinary skills and adaptable competencies, rather than solely focusing on providing basic knowledge. This shift in approach aims to provide students with the necessary skills to succeed in today's world and effectively deal with various situations (Cansoy, 2018). In this context, based on the belief that 21st century skills constitute a new paradigm in education, it is of great importance that education systems keep pace with this change and provide these skills to students (Ağaoğlu & Demir, 2020). In today's rapidly changing and complex world, adopting an educational approach that focuses on providing students with skills such as critical thinking, problem-solving, flexibility, communication, and cooperation will play a critical role in raising

qualified individuals who will contribute to society (Walser, 2008). Therefore, the adaptation of education systems to 21st century skills will pave the way for individuals and societies to build a successful future.

According to Ucak and Erdem (2020), within the framework of the 21st century, schools necessitate to be structured as an institution that shapes society and leads social development rather than being an institution where only knowledge and skills are transferred. Today's schools can achieve this leadership by following the change required by the age and with a dynamic level of organizational learning (Yavas & Celik, 2020). Moreover, Wagner (2008a) emphasizes that today's school curricula are insufficient in terms of planning and implementation and points out that there is a significant gap between the knowledge and skills taught in schools and the practical skills that students need in daily life (Sarigoz, 2016). This situation may cause graduates to feel inadequate in dealing with the problems they will encounter both in the business world and in social relations. At this point, a curriculum restructured in line with 21st century skills will increase students' effective participation in society and allow them to better realize their potential.

The rapid expansion of information and communication technologies (ICT) underscores the need for a comprehensive grasp of the global economy and ongoing adaptation in methods of both work and learning (Sarigoz, 2014). This requires individuals to focus not only on traditional knowledge and skills but also on 21st century skills in order to succeed in today's world. Although these abilities are classified as education and workplace learning skills within the contemporary economy, they are also a vital requirement for

effective citizenship practice. Therefore, 21st century skills require individuals to serve not only in their educational and professional lives but also as active and informed participants in society. Although the need to develop skills that will contribute to the information society has been taken into consideration at this point, there is not a common definition of 21st century skills in the literature yet (Anagun, 2018; Voogt & Roblin, 2012). In this context, Trilling and Fadel (2009) classified 21st century skills under three main headings: "learning and innovation skills", "digital literacy" and "career and life skills", while Wagner (2008b), based on interviews with senior managers, examined 21st century skills under seven different headings: "critical thinking and problem solving", "imagination and curiosity", "agility and adaptability", "effective oral and written communication", "collaboration and leadership ", "initiative and entrepreneurialism", and "accessing and analyzing information". It can be seen that these definitions prove that discussions about the importance and nature of 21st century skills are ongoing.

1.1. Scope of 21st Century Skills

21st century skills encompass a variety of fundamental and ancillary skills covering life skills, socio-emotional skills, technical proficiencies, social aptitudes, and transferable competencies. Technical proficiencies like data analysis and computer programming are deemed indispensable for meeting job demands. Conversely, soft skills such as communication, active listening, attention to detail, conflict resolution, critical thinking, and empathy are challenging to quantify due to their human-centric and intricate nature. Information communication technology (ICT) skills, digital skills, and digital literacy are widely used

interchangeably within this domain. They play a pivotal role in fostering business success and are central to 21st century skillsets (Joynes, et al.,2019). The 21st century is characterized by various cycles including critical thinking, innovation, problem-solving, metacognition, ICT literacy, empathy, communication, learning, collaboration, information literacy, citizenship, personal and social responsibility, and life and career (GPE, 2020). Research findings indicate a positive correlation between 21st century developments and enhanced academic performance, emphasizing the importance of fostering these advancements within alternative learning environments and schools. It is evident that these developments are interconnected processes and should not be treated as isolated entities (Koser, 2022). Consequently, it is imperative to promote the development of 21st century skills within both educational institutions and alternative learning environments (GPE, 2020).

Although the importance of 21st century skills has been underlined in many studies (Ağaoğlu & Demir, 2020; Goksun & Kurt, 2017; Lai & Viering, 2012), there are various views on the scope of 21st century skills in the literature. In this section, these skills are discussed under three main headings: 'Learning and Innovation Skills', 'Literacy Skills', and 'Life and Career Skills'. The general framework of the 21st century skills mentioned in this context is shown in Figure 1.

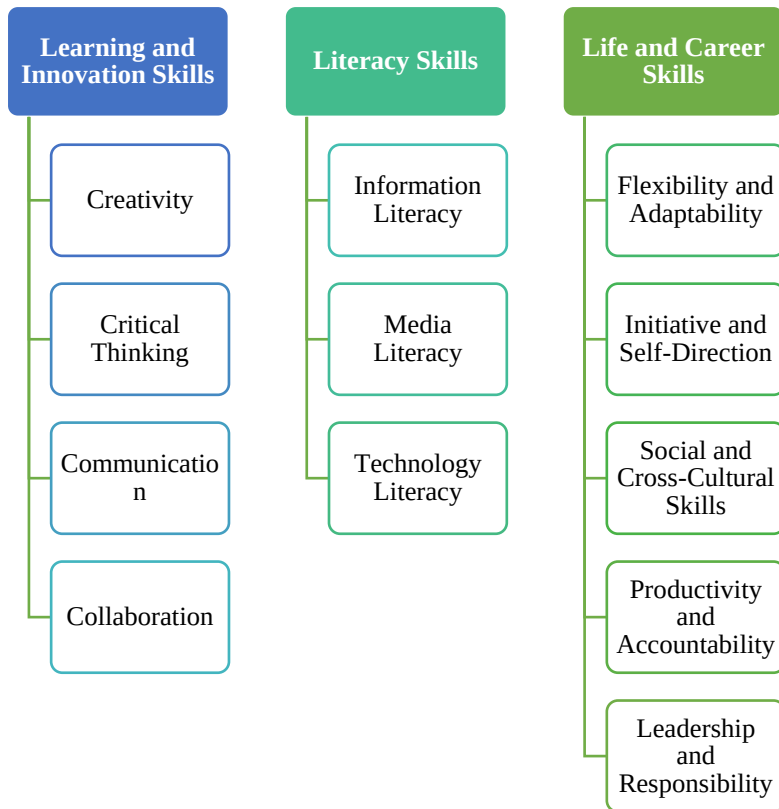


Figure 1: Classification of 21st century skills

1.1.1. Learning and Innovation Skills

These skills are described in four main frameworks: creative use of knowledge, openness to different perspectives, critical thinking, effective communication, and collaboration.

1.1.1.1. Creativity

Creativity is an individual's ability to develop a flexible, original, and unique perspective in the face of various problems, issues, or situations. In other words, creativity is defined as bringing things together in unusual and unconventional ways, building something new and unique, or observing elements that may be

overlooked (Brookhart, 2010). Therefore, it can be said that the concepts of creativity and innovation are affected by organizational problems, lack of knowledge, and different perspectives (Yavas & Celik, 2010). These issues will allow for the generation of new insights that will effectively contribute to the organization. The concept of innovation, which is closely associated with creativity, involves the spread of new ideas instead of incompatibilities or lack of knowledge, aiming to make a product or service more beautiful, useful, and accessible to a wider audience (Sungur, 1997).

According to Ozturk (2004), creativity plays a fundamental role in various life conditions and human relations as well as in the fields of art and science. In other words, creativity, with its wide range of applicability, contributes to producing original and innovative solutions not only in the scientific and artistic sense but also in various areas of daily life such as the business world and especially educational practices. In this context, students with creativity skills should have various qualities such as using idea-generation techniques effectively, generating innovative and valuable ideas, and analyzing and evaluating these ideas (Partnership for 21st Century Learning, 2015; Trilling & Fadel, 2019). In addition, educational administrators should use various ideation techniques such as brainstorming to create valuable knowledge and consider marginal and radical concepts in order to develop students' creativity skills. They should also enable employees to evaluate and analyze their own departments, be sensitive to different perspectives, and adapt to the real world without limiting originality. The knowledge or products produced should be used in the field without fear and should make a tangible and useful contribution (Partnership of 21st Century Skills, 2016).

1.1.1.2. Critical Thinking

Critical thinking is a multifaceted process involving a series of complex activities. According to Cansoy (2018), critical thinking includes the processes of evaluating a subject and/or situation independently and objectively, testing the accuracy of the information, and using the acquired knowledge in problem-solving. According to Cottrell's (2005) research, critical thinking involves understanding and managing one's thought system structures to demonstrate intellectual skills and problem-solving abilities. Bringham (1998) defined problem solving as examining the dimensions of a problem in detail and determining various solutions by analyzing the relationship patterns between these dimensions.

Educational professionals and managers with effective critical thinking skills should make informed decisions in complex situations, comprehend the relationships between variables, find solutions, and ask the right questions to find the best solutions. They should also have the ability to analyze and synthesize to solve problems that require specific skills. If these skills that should be possessed by educators are listed;

- Questioning the cause,
- Understanding complex systems,
- Asking critical questions,
- Deciding on solutions,
- Making effective analyses,
- Evaluating beliefs, claims, evidence, and alternative viewpoints,

- Synthesizing information and interpretations,
- Summarizing the importance of problem-solving skills, including building relationships,
- Moving between information and interpretations, visualizing results, reflecting on learning experiences, criticizing decisions and procedures, and using both traditional and unconventional techniques to solve problems (Partnership for 21st Century Skills, 2008).

Taking into account all of these, the aforementioned skills clearly demonstrate the importance of questioning reason, analyzing interactive parts, asking critical questions, evaluating evidence, and synthesizing information.

1.1.1.3. Communication

Communication involves the written and verbal expression of feelings and changes provided by the sender and receiver. In other words, communication is the open and effective sharing of ideas and behaviors between two individuals or groups. According to Uluyol and Eryilmaz (2015), people interact with the social environment they are in without realizing it and share ideas about the problems they face. Today, communication, which is the most basic building block of accessing new information, is characterized as an indispensable element of humanity (Ciftci et al., 2021). Especially in the dynamic and rapidly changing world of the 21st century, communication skills are critical for individuals to exchange information with each other.

Effective communication skills play a vital role in both the professional and personal lives of individuals. Moreover, these skills

help individuals to establish productive interactions in personal relationships and business life by allowing them the opportunity to express their feelings, thoughts, and information effectively. People with effective communication skills are generally characterized as self-confident, empathetic, open-minded, and cooperative. From this point of view, as a result of effective communication in the workplace, it can be said that employees who have listening skills, use positive body language, communicate effectively, and express their thoughts clearly and understandably will have higher job performance. In addition, these people strive for sustainability, use motivating language, and show mastery in persuading their employees. In addition, it can be said that the empathizing skills of these people are highly developed. Empathy also constitutes an important aspect of communication styles and enables effective communication with external parties (Milner, 1989). Furthermore, it can be asserted that individuals with strong communication aptitude tend to achieve greater success, particularly in educational contexts, and demonstrate a more positive development in their communication skills with educators (Hacicaferoğlu, 2022).

1.1.1.4. Collaboration

Collaboration means that people with different skills and experiences come together and work towards a common goal. Within the framework of these qualities, collaboration involves individuals coming together to create joint work to achieve success (Uluyol & Eryilmaz, 2015). Therefore, collaboration skills within the framework of 21st century skills play a vital role in the development of extraordinary and creative solution proposals, healthy decision-making processes, and the creation of an efficient working environment.

In today's complex and dynamic business environments, it is becoming difficult for individuals to be successful alone; that is why, collaboration skills are becoming increasingly important. Collaboration, which is considered as an important skill, especially in the business world and education systems, contributes to the solution of complex problems and the development of innovative perspectives. In this context, collaboration involves processes such as bringing together employees in an organization to solve common problems, exchange ideas, and act together. Moreover, collaboration requires employees to understand each other's needs, interests, and challenges, to compromise, and to be flexible to achieve a common goal. At this point, the key skills that require collaboration can be listed as effective and respectful teamwork, flexibility, willingness and ability to provide assistance, and understanding how employees share responsibilities and contribute to the success of the team.

1.1.2. Literacy Skills

Increasing access to information resources with rapidly changing technology has made it necessary to use media tools efficiently and analyze and evaluate the information accessed. Digital literacy skills are defined by Trilling and Fadel (2009) as information curiosity, technology-based learning skills, and media use. In the 21st century, literacy skills should be transferred to future generations in terms of internalizing information and associating it with daily life, enriching and evaluating the content (Ucak & Erdem, 2020). In this context, it is of great importance for individuals to have literacy skills in order to be able to exist effectively in the information age.

Throughout the education process, students should increase their proficiency levels by focusing on developing their knowledge

and skills in basic academic areas such as writing, reading, listening, speaking, math, and science. These skills prepare the ground for them to learn and use other 21st century skills. In other words, having knowledge and skills in basic academic areas enables students to reach and actualize 21st century skills. Therefore, having sufficient knowledge and skills in basic academic areas such as reading, speaking, writing, listening, mathematics, and science constitute students' basic skills and help them acquire other 21st century skills.

Literacy skills are analyzed under three headings: information literacy, media literacy, and technology literacy.

1.1.2.1. Information Literacy

Today, reading, writing, and basic mathematics skills are no longer sufficient, and much more is considered necessary for life skills (Gelen, 2017). In this context, information literacy is identified as the ability to access accurate and reliable information sources, to understand and analyze information, to use accurate and creative information to solve problems, and to access sufficient and effective information through critical evaluations (Partnership for 21st Century Skills, 2008). Additionally, information literacy involves identifying, evaluating, organizing, and effectively using information to solve problems. Therefore, access to and evaluation of information is crucial in terms of productivity and resource efficiency.

Information literacy is a type of skill that individuals should have in the fields of media, information, and technology in parallel with rapidly developing technology. From this point of view, individuals with information literacy skills have various qualities such as knowing the context of the information needed, accessing it

efficiently, evaluating information sources critically, selecting and combining the necessary information from the knowledge base, using information effectively for a specific purpose, and considering legal, economic, and social factors (Demiralay & Karadeniz, 2008). In a report prepared by the National Commission on Library and Information Science (NCLIS), information literates are defined as people who can access information using various information tools as well as primary sources (Uluyol & Eryilmaz, 2015).

1.1.2.2. Media Literacy

Media has an important function in providing information about current events, presenting educational content, informing the public, protecting cultural identity, promoting products and services, and supporting democratic values. Media literacy can be defined as understanding how media messages are presented, their purposes, and the tools used to convey them. This type of literacy includes understanding how media messages influence people's beliefs, behaviors, and values and how they can be personally interpreted. In addition, media literacy involves recognizing fact and fiction, accepting that the media world may not be reality itself, and understanding that the media has a role in directing and managing functions. It also involves assessing what individuals can strive to achieve. Thoman (2003), the founder of the Centre for Media Literacy, defined media literacy as the interpretation of verbal and visual symbols transmitted through mass media such as television, newspapers, radio, and computers, and making original meanings.

21st century media skills include accessing, understanding, and analyzing media messages, understanding how they are constructed, their impact on beliefs and behavior, and how the media influence and accept viewpoints. It is important to develop a basic

understanding of the legal and ethical issues related to media use and access. In general, media literacy aims to raise individuals who can correctly evaluate and use information regardless of its source (Partnership of 21st Century Skills, 2008). According to Kalan (2010), in order to raise a conscious society, media literacy should be taught from the primary school age, and thus children and adults should be given the habit of conscious media consumption.

Media literacy is important not only in the field of education but also for adults operating in the business world. Media literacy training has a critical place in business life in order to be able to distinguish between reality and fiction and to make correct determinations. In fact, employers need employees who can analyze and critically evaluate media messages. Similarly, this training also enables individuals to develop resistance against manipulation and to be protected against false and misleading information. Therefore, media literacy skills play a vital role in the correct use of media, being aware of digital threats, and developing a critical perspective.

1.1.2.3. Technology Literacy

In the 21st century information age, technology is in constant change and transformation. In particular, the inclusion of digital technologies in many areas from communication to education, from business to personal life has made it necessary to keep up with the requirements of this technological age and to use technology effectively. In this context, technology literacy can be characterized as the ability to use information and communication technologies effectively. Moreover, in the 21st century, technology literacy skills are essential for the academic, personal, and professional development of individuals.

Technology literacy is the ability to use digital technologies effectively for information technology functions, including creating, evaluating, integrating, managing, and accessing information using appropriate communication networks and tools. According to Trilling and Fadel (2009), technological literacy is an individual's ability to access, structure, and evaluate information by using appropriate technological tools and equipment in any situation.

Technology literacy is necessary for individuals to understand the relationship between technology, themselves, and society. It also includes an understanding of legal and ethical frameworks in information use and access. Technology literacy aims to organize, evaluate, and research communication information, use appropriate social networks and network communication tools, and manage and access information in order to successfully fulfill the functions of the knowledge economy (Partnership for 21st Century Skills, 2008).

A technologically literate person has the potential to understand, analyze, and evaluate complex technological information (Silik & Aydin, 2021). In addition to these, the aforementioned people have effective communication skills as well as being conscious of the correct and effective use of digital media. It is seen that technological literacy includes not only the ability to use a device and run an application or software but also the processes of examining technological information from a critical perspective, ensuring security in online environments, processing, structuring, and making sense of information.

1.1.3. Life and Career Skills

Throughout both ancient and modern eras, as well as since the inception of humanity, the necessity for individuals to acquire both social and professional skills from a young age has persisted. This has remained not only as a requirement of life but also as a necessity for sustaining life and meeting the individual's needs. Primarily, families have endeavored to meet these requirements for their children, seeking support from their surroundings when they perceived their own knowledge and skills to be insufficient or unable to fulfill these needs. Initially, this support was obtained individually from philosophers, while in later periods, it began to be acquired through apprenticeship relationships and eventually from schools specializing in various subjects.

Through social and professional skills, students can acquire numerous qualities such as coping with various tasks and responsibilities, self-management, entrepreneurship, establishing social relationships, adapting to different cultures, working efficiently, and leading (Sarigoz, 2020). These skills include being flexible, taking initiative, having social skills, productivity, leadership, and intercultural adaptability.

1.1.3.1. Flexibility and Adaptability

Adaptability refers to an organization's ability to adapt to various responsibilities and roles by working effectively considering changing priorities and uncertainties. According to Uluyol and Eryilmaz (2015), adaptation means reacting to environmental conditions with a flexible perspective when things change. Organizational flexibility includes reacting to environmental changes at the right time and continuous improvement through the learning of employees and managers (Ceylan, 2001).

The world is going through a large-scale transformation process and therefore flexibility and adaptability skills are becoming an important criterion in areas such as education, business life, and citizenship in the 21st century (Uluyol & Eryilmaz, 2015). In other words, factors such as technological advances, social changes, and globalization bring about change in many areas. Moreover, societies that resist change, become exhausted, fail to respond to needs, and cannot adapt to modernization will struggle to keep pace with the requirements of the era and are destined to lag behind (Sarigoz & Cermik, 2012). Therefore, having flexibility and adaptability skills contributes to individuals coping with various difficulties and adapting to changing world conditions.

Yalcin (2018) listed the characteristics of students with flexibility and adaptability skills as adapting to changing situations, roles, and contexts, taking into account various opinions and thoughts in order to find solutions to problems, and balancing solution suggestions. In addition, it can be said that these people are quite successful in coping with stress.

1.1.3.2. Initiative and Self-Direction

21st century skills are not only limited to academic knowledge and technical skills but also include a number of skills that support the personal development of individuals such as taking initiative and self-management. These skills aim to increase individual performance and facility effectiveness by taking responsibilities beyond their roles (Akin, 2014). In this context, taking initiative is defined as assuming responsibility by taking risks in certain situations. Self-management skills, on the other hand, involve women's control of decision-making processes, including customer relations, production methods, planning, and division of

labor (Beyerlein, 1994). In other words, self-management is characterized as using time and goals in the most accurate way in line with today's needs (Uluyol & Eryilmaz, 2015). These skills help individuals to assume a leadership role in both their personal and professional lives, fulfill their responsibilities, and make correct and effective decisions.

Initiative-taking and self-management skills are becoming increasingly important in the 21st century. Today, living in a rapidly changing and developing world makes it necessary for individuals to make decisions and direct themselves independently. Similarly, rapid developments in technology and easy access to information have made it necessary for individuals to take an active role in the learning process and to direct their own learning experiences. Therefore, it is an undeniable fact that taking initiative and self-management skills contribute to individuals in many areas including the business world and education.

In this context, an educational administrator with the aforementioned skills is expected to determine his/her own learning development, exhibit professional and advanced skills, define activities, use time efficiently, and be committed to distribution as a lifelong process (Sarigoz, 2020). This approach will also help to ensure effective communication and collaboration among employees.

As a result, it can be said that people with initiative and self-management skills are very successful in overcoming difficulties and making strategic decisions. Therefore, it is important to develop these skills for the general welfare of the individual and society.

1.1.3.3. Social and Cross-Cultural Skills

Social and cross-cultural skills play an important role in effective collaboration, harmonization, and fostering innovation. These skills include working professionally, presenting oneself professionally, respecting others, and embracing different cultures. Managers with these skills have a number of qualities such as communicating effectively, adapting to individuals from different backgrounds, being open to different values and ideas, and using new knowledge for innovation. As Yalcin (2018) states, students with social and intercultural skills are competent in communicating effectively, respecting social and cultural differences, collaborating between groups, and producing innovative solutions.

These skills make it possible to work effectively with people from different cultural and social backgrounds in the modern business world. Furthermore, social and intercultural skills contribute to a culture of tolerance and cooperation in the workplace. Therefore, employees with these skills can increase their job performance and create a positive atmosphere at work. Thus, by adopting these skills, they will bridge cultural differences and improve the quality of work.

It is seen that social and intercultural skills have a vital importance in a wide range of areas from educational institutions to workplaces. Considering all this information, it is inevitable for an individual who wants to be successful in the 21st century to develop social and intercultural skills. Ozturk and colleagues (2018), as well as Gunel and Hacicaferoğlu (2022), state in their research that participation in social and sporting activities creates a positive outlook on life for individuals.

1.1.3.4. Productivity and Accountability

'Accountability' is described as the ability of officials in an organization to respond to their authority and responsibilities, to act without criticism, and to take responsibility in cases of failure, incompetence, or dishonesty. Accountability encompasses goals in the work environment such as meeting management, ethical work, and cooperation. It also requires not giving up despite obstacles and competitive pressure, determining the characteristics and visibility of the plan, and delivering high-capacity and high-quality products (Schater, 2000). Productivity is prioritizing, planning, and applying skills and knowledge in order to make accurate and sound decisions in a constantly changing environment (IOWA, 2013).

Productivity and accountability skills are important qualities that enable individuals to work effectively and productively in business or educational environments. According to Uluyol and Eryilmaz (2015), productive individuals have been needed both in the workplace and in educational institutions for centuries. So much so that in the 21st century learning structure, especially project identification, planning, execution, and evaluation skills have become the basic building blocks of productivity. As a matter of fact, what is expected from 21st century people in terms of productivity and accountability is to manage qualified projects and to be able to analyze the results obtained from these projects. Therefore, productivity and accountability skills are a basic requirement for individuals to be successful at school, at work, and in their lives.

The students with productivity and accountability skills exhibit characteristics such as project management, identifying priority needs in line with goal achievement, respecting cultural diversity, ethical work ethics, time management, and cooperation

(Yalcin, 2018). According to Gelen (2017), these individuals should have versatile working, active participation, taking responsibility for the results, and professional and effective presentation skills. According to Sarigoz (2017), students not only learn at school but also can reinforce what they have learned at home through flipped instructional methods.

1.1.3.5. Leadership and Responsibility

Leadership and responsibility are two fundamental concepts in management. Leadership involves influencing and directing employees by using organizational goals and interpersonal skills. Maintaining leadership involves examining the interests and relationships of society, guiding employees in solving personal problems, pushing them to achieve common goals, inspiring them to fulfill tasks, and ensuring ethical behavior in other units. Responsibility, on the other hand, can be defined as the fulfillment of the duties undertaken by an individual or accountability for a job done. In this context, it can be said that both concepts aim to inspire and influence the success of the organization.

Effective leadership and a sense of responsibility are considered as the keys to success in all areas of life. According to Uluyol and Eryilmaz (2015), leadership is characterized as one of the sought-after characteristics of the business world and plays a fundamental role in making effective decisions, especially in times of crisis. Similarly, it can be said that leaders and responsible individuals have an empathic, decisive, and flexible thinking structure.

Leadership and responsibility skills bring with them various qualities such as looking after the interests of society, displaying

ethical and exemplary behavior, and guiding individuals toward achieving a common goal (Gelen, 2017). Due to increasing competition, labor force, and rapid change in modern life, the characteristics expected from leadership have changed in a wide range 2015. In other words, while the understanding of leadership in ancient times was based on an authoritarian and hierarchical structure, leadership in the 21st century world has evolved into a participatory, sharing, and innovative structure. At this point, 21st century leaders are characterized as individuals who transform ideals into concrete steps, obstacles into opportunities, risks into rewards, and challenging opportunities into valuable achievements (Kouzes & Posner, 1995).

2. Values and Values Education

Values are very important for the character development of the individual and affect social, mental, spiritual, and emotional development. Determining the norms and principles of the society, and values show individuals what is important, what choices should be made, and how they should live (Akbas, 2008). From this standpoint, values play a guiding role in the utilization of skills, rendering them a crucial component of the 21st century skill set model described in this study. Values and skills, as closely interrelated concepts, constitute the basic components of character development.

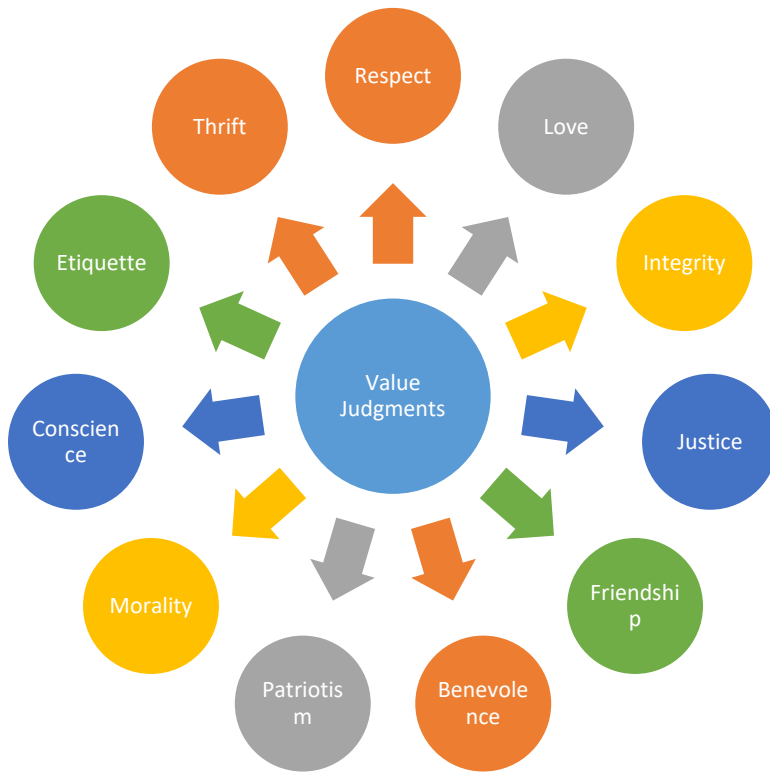


Figure 2: Classification of value judgments

Respect stands as a foundational element of human conduct, encompassing values, beliefs, practices, opinions, privacy, and rights. It constitutes an integral aspect of familial cohesion, friendship, integrity, justice, civility, patriotism, conscience, morality, etiquette, and thrift. Rooted in personal, cultural, and societal values, respect embodies a set of behaviors, endurance, and beliefs that delineate moral conduct and ethical behavior. *Love*, a significant facet of familial unity, embodies sacrifice, loyalty, trust, and affection. *Integrity* involves an understanding of ethical principles and values, showing sincerity, reliability, humility, and

truthfulness. *Justice* entails the capacity to act impartially and equitably by sharing values within society. *Friendship*, characterized by altruism, solidarity, understanding, trust, cooperation, and loyalty fosters social bonds and mutual support. *Benevolence* is closely associated with cooperation, generosity, hospitality, sharing, and compassion. *Patriotism* is defined by industriousness and solidarity, along with a deep appreciation for nature and natural heritage. *Morality*, shaped by cultural, personal, and societal values, encompasses a set of endurance, behaviors, and beliefs that delineate right from wrong. *Conscience* entails sensitivity and empathy towards diverse perspectives, guiding moral decision-making. *Etiquette* denotes the respect and civility inherent in societal norms, while *thrift* encompasses the prudent utilization and management of resources (Camara et al., 2015; Care & Luo, 2016; Council of Europe, 2016; Lippman et al., 2015; MEB, 2017; MOE, 2018; TDK, 2023; UNICEF, 2017).

Values education concentrates on cultivating character, instilling ethical principles, and fostering an understanding of social responsibility. It encompasses fundamental human values like respect, honesty, responsibility, justice, cooperation, tolerance, and empathy. Additionally, it encourages individuals to take an active role in society rather than focusing solely on personal success. In this regard, appropriate environments, especially educational institutions, should be effectively utilized to instill these specific values in students.

According to Akbas (2007), schools undertake important responsibilities such as transferring cultural values to students, imparting values that are explicitly stated and/or not stated in the school program, contributing to their moral development, and

supporting their character formation. In fact, values education in our country was emphasized in the decisions of the 20th National Education Council held in 2021 and it was pointed out that values education practices should be carried out by taking into consideration the developmental level of the child, especially in the pre-school program (MEB Sura Kararlari Dosyasi, 2021). As per National Education Basic Law No. 1739 (MEB, 1973), the general purpose of Turkish National Education is stated as "...to educate as citizens who adopt, protect and develop the national, moral, humanitarian, spiritual and cultural values of the Turkish Nation". It is seen that values education has become an integral part of school environments.

The social structure has undergone a continuous evolution and transformation throughout history, which has led to a radical change in people's lifestyles, behavior patterns, value judgments, habits, and needs. This constantly evolving nature of societies has made it difficult for individuals to adapt to society and has led to the conflict of value systems (Akbas, 2007). So much so that this situation has led to the deterioration of social unity and solidarity and the emergence of social conflicts. In this respect, values education aims to provide moral and values such as love, respect, justice, honesty, courage, conscience, virtue, and benevolence.

In addition to contributing to the personal development of the individual, values education also serves the general welfare of society. According to Kamer and Sahin (2020), the two main purposes of values education are to contribute to individuals to lead a characterized life and to ensure social peace and harmony. Based on this information values education aims to establish healthy relationships in society, to ensure social welfare, and to build a

sustainable society by protecting social values and norms. Moreover, these norms and values are also important within the work environment. Negative behaviors that can arise at every level of the workforce may lead to adverse developments in societies' production processes and particularly in their value judgments (Sarigoz et al., 2015; Hacicaferoğlu & Hacicaferoğlu, 2022).

In the light of the information obtained about values education, it can be said that this education contributes to the character development of individuals as well as ensuring the continuity of society.

3. 21st Century Skills and Values Education

In today's technology-oriented world, success is based not only on traditional knowledge and skills but also on high-level thinking skills such as processing, analyzing, structuring, and evaluating information. Within this context, the basic skills of the 21st century include critical thinking, communication, problem-solving, collaboration, media literacy, innovation, knowledge management, and versatility, and these skills bring not only memorization but also understanding, synthesis, and practicing. In this respect, 21st century skills are vital for success in a rapidly changing and complex world.

Modern education has been criticized for years for not effectively addressing social problems such as violence, lack of understanding, mistrust, and dishonesty while accommodating technical curricula. At this point, UNESCO points out that the destruction of natural resources, the loss of human values, and production and consumption habits that encourage irresponsible greed need to be specifically addressed. Therefore, in order to

prevent the disasters caused by our current human paradigm, it is of great importance to emphasize values in all areas of education. In other words, educational institutions in democratic societies should focus not only on intellectual development but also on developing students' human values, ethical principles, moral attitudes, and behaviors. Otherwise, trying to meet technological needs by purifying educational activities from basic values and principles will lead to a confusion of values (Yazici, 2006).

The association between education and values in the 21st century is revealed by the rapid and complex progress of our times. Both education and values education involve similar goals but approach them from different perspectives. In the 21st century, sustainability and values education concentrates on the development of technical skills, social responsibility, and ethical values. Collaborative values education combines values such as tolerance, empathy, and respect, while critical thinking and integrity help to analyze ethical issues and make informed decisions. Meanwhile, solutions based on ethical values can be applied at the social level, fostering creativity, productivity, and responsibility. Knowledge and value education are vital for personal and social success. From this point of view, integrating values education into the process and having knowledge about these trainings will help individuals to live meaningful and effective lives.

Values education is a crucial aspect of 21st century life that focuses on the knowledge, skills, and abilities necessary for success in society and business. It involves deep learning, analytical thinking, problem-solving, and cooperation and differs from traditional and academic units. It focuses on children's character development and ethical details, enabling them to respect others,

take responsibility, be tolerant, act fairly, create peaceful solutions, and behave ethically globally.

The relationship between 21st century life and values education makes it necessary to equip children with both knowledge and values. In this context, *critical thinking* helps to question value judgments, while *communication* enables interaction with different cultures, and encourages creativity and innovative technologies in line with values. *Flexibility* allows adaptation to life, structure, and values. Other than that, *collaboration skills* include value judgments such as empathizing and accepting different perspectives. Similarly, when *leadership and responsibility skills* are considered together with value education, they become the carrier of basic qualities such as honesty, empathy, and justice that a leader should have.

While 21st century skills include the basic skills required for individuals to keep up with the needs of the age, values education includes some ethical principles that support their character development. From this point of view, 21st century skills emphasize skills such as critical thinking, collaboration, creativity, and communication that are necessary for individuals to sustain their lives. On the other hand, values education includes qualities such as justice, honesty, love, friendship, conscience, good manners, and benevolence. The fact that these two areas complement each other contributes to the individuals leading an appropriate life within the framework of ethical values rather than just academic success. In other words, if 21st century skills are used in harmony with core values, individuals will act with an awareness of their social responsibilities and exhibit behaviors in accordance with norms and principles. In this way, a fair, honest, and respectful environment will be built in society.

Considering all this information, values education has become a basic necessity for raising important individuals. These areas contribute to producing solutions for individuals, revealing individual potential, and protecting knowledge and values. For this reason, growth and values in the 21st century education process are of great importance in terms of the place of education that will enable children to grow up as knowledgeable and valuable individuals (Cansoy, 2018; Cetin & Cetin, 2021; Orhan-Goksun, 2017; Trilling & Fadel, 2009; Yalcin, 2018).

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