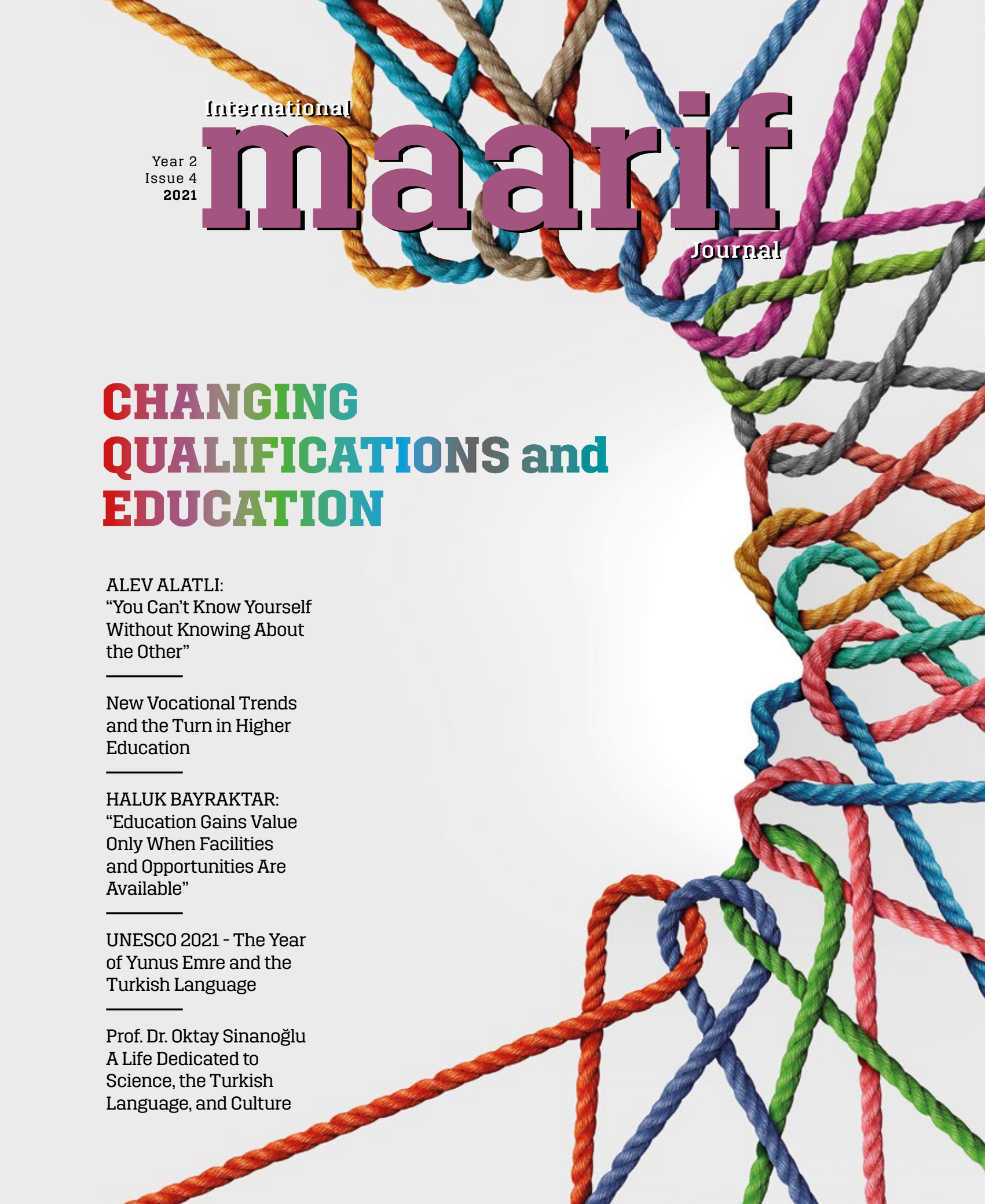
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Year 2
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2021



CHANGING QUALIFICATIONS and EDUCATION

ALEV ALATLI:
"You Can't Know Yourself Without Knowing About the Other"

New Vocational Trends and the Turn in Higher Education

HALUK BAYRAKTAR:
"Education Gains Value Only When Facilities and Opportunities Are Available"

UNESCO 2021 - The Year of Yunus Emre and the Turkish Language

Prof. Dr. Oktay Sinanoğlu
A Life Dedicated to Science, the Turkish Language, and Culture

More than 72,000 companies have INVESTED IN TÜRKİYE



how about you?

5.3% average annual real GDP growth rate
2003 - 2019

13th largest economy in the world
GDP at PPP prices, 2019

more than **800,000** university graduates
per year

$222 billion FDI inflows into Turkey
2002 - 2020 July

$754 billion of GDP at current prices
2019

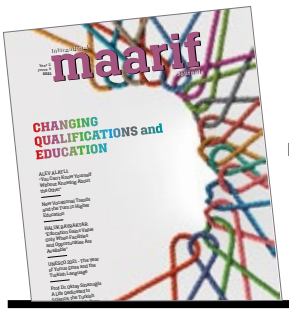
83.15 million of population
with half under the age of 32.4
2019

PRESIDENCY OF THE REPUBLIC OF TURKEY
INVESTMENT OFFICE

The Presidency of the Republic of Türkiye Investment Office, the official investment advisory body of Türkiye, is a knowledge center for foreign direct investments and a solution partner for the global business community at all stages of investments. It provides customized guidance and qualified consulting before, during, and after entry into Türkiye.



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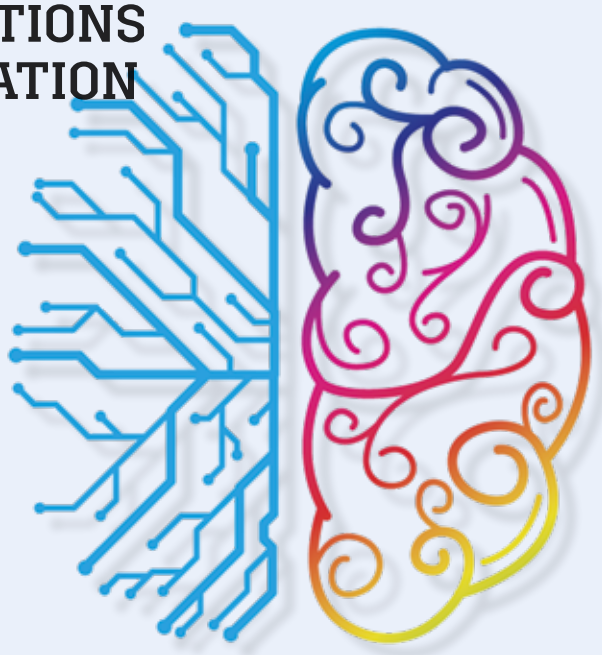
In this fourth issue of the *International Maarif Journal*, the topic of **changing qualifications and education** is reviewed from different perspectives by academics and other experts.

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Alev Alatlı

"You Can't Know Yourself Without Knowing About the Other"

If this planet will survive, it will do so thanks to people who have not been processed on the workbench of the Enlightenment. You do need to know what the Enlightenment is. Remember that in order to be able to describe yourself, you need to describe the other, as well. No lines can be drawn otherwise... *p 18*



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EDUCATION THEORIES

EDUCATION AS A CONSTRUCTION PROCESS: CONSTRUCTIVISM

Assoc. Prof. Dr. Kerim Karabacak

Constructivism is a concept of learning, whereby every learner constructs his or her own knowledge. In other words, constructivism is an individual's creation of his or her own knowledge resembling a building under construction. *P. 66*

Maarif Dictionary

Eyyup BOSTANCI



COUNTRIES AND CULTURES

Azerbaijan Pearl of the Caucasus

Azerbaijan - home of hospitable and kind people, a land rich in both underground and surface natural resources, and a sibling country of Turkey that adheres to the idea of "one nation, two states" in its relations with Turkey *P.70*

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INTERVIEW

Haluk Bayraktar

"Education Gains Value Only When Facilities and Opportunities are Available"

I think that we can achieve progress in technology by blending good education with good opportunities offered to students. Our young people can now fulfill their potentials thanks to today's Turkey investing more in technology. *P. 84*



PPORTRAIT

Prof. Dr. Oktay Sinanoğlu

A Lifetime Dedicated to Science, the Turkish Language, and Culture

Prof. Dr. Sinanoğlu, worked for the recovery and development of the Turkish language and he passed the torch that he himself had taken from many previous scientists, artists, and statesmen to the educators and intellectuals of the next generation. *P. 92*

CULTURE AND ART

108 / Movies to Watch with Your Children During Summer Vacation ileceğiniz Filmler **Minşa Gülter**

Watching movies with your children is one of the best ways to have a good time with them during long holiday periods. We have listed the following movies that touch emotions and remind viewers of common values for you to watch as a family this summer vacation.



CULTURE AND ART

108 / Our Yunus: Come, Let's Get Acquainted **Furkan Güleç**

The 700th anniversary of Yunus Emre's death has been included in the commemoration and celebration anniversaries to be held by UNESCO. 2021 was declared as the year of Yunus Emre and the Turkish language by the Presidency of the Republic of Turkey with the mottos of "Our Yunus" and "Turkish, a World Language."

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PROF. DR. BİROL AKGÜN
CHAIRMAN OF THE BOARD
OF TRUSTEES OF TURKISH
MAARIF FOUNDATION

IS EDUCATION READY FOR THE NEW WORLD?

The *International Maarif Journal,* the first English issue of which was published in July 2020, is now enjoying the pride of completing its first year with this second English issue. In our journey, we began sharing with the world the knowledge of Turkish Maarif Foundation, one of the world's most globally widespread educational institutions. We are now happy to see that our journal has quickly become a meeting point for academics and authors who deal with problems in education. Our journal has made great headway in the past year. The positive feedback and comments from our readers prompted us to pursue more effective publication strategies. Our journal will keep progressing steadily toward its goals with the strength that it gets from you, our readers.

In this issue of our journal, we discuss the topic of changing qualifications and education. The widespread use of automation, transformations in production processes, increasing digitalization in all areas, the ease of access to information, and dozens of other developments that we encounter as a consequence of technological advancements urge us to think about the competencies of the new generation. Today, the concept of "profession" is very flexible and can have a variety of meanings in contrast to the past understandings of the term. It no longer seems possible to specialize in a single profession and do the same job until retirement. A study conducted by the American Bureau of Labor, as reported in their statistics for 2019, revealed that an average worker changes jobs 12 times during his or her career. This situation can also be interpreted as proof that individuals can change their fields of expertise by learning new things throughout their careers. It seems that we are about to step into a new world, where influential individuals will be those who can adapt to developments, have the capacity to think about and interpret their environments with an interdisciplinary mindset, and can make a difference. We have to achieve the necessary transformation in our education system to be able to prepare for the world of the future by educating people who have these qualities and the ability to interpret information.

With this in mind, the *International Maarif Journal* has selected the topic of changing qualifications and education as the cover subject for this issue of the journal, tackling this topic in all its aspects, with the contributions of a group of distinguished academics. It is an obvious fact that the changes we are experiencing as a result of the COVID-19 pandemic have led to an irreversible transformation, or at least an accelerated transformation, in various sectors, and especially in the education sector. As a consequence of digitalization, many professional fields will effectively lose their traditional functions or will entirely become fields of the past. However, new professional fields and new lines of business will also come into our lives. Educators in particular bear the greatest responsibility to prepare the younger generation for life by equipping them with the qualifications required by the modern world.

I hope that this journal will contribute to the discussions on the responsibilities of education by addressing this vital issue at a time when global developments are changing societies at an unimaginable rate.

Educators in particular bear the greatest responsibility to prepare the younger generation for life by equipping them with the qualifications required by the modern world.

34%
Proportion of learners with internet access at home in Africa

89%
Proportion of learners who **don't** have a household computer in Africa

Discussion of the Digital Learning Turn in Africa

On the occasion of Africa Day on May 25, 2021, UNESCO brought together ministers, education stakeholders, and private sector representatives from the African continent for an online Global Education Coalition (GEC) Forum entitled "The Digital Learning Turn in Africa: The Role of Africa." .

In Africa, as in other parts of the world, school closures due to the COVID-19 pandemic have prevented millions of students from receiving proper education, exacerbating pre-existing educational disparities. This situation has affected disadvantaged groups more negatively, particularly girls, children with disabilities, and learners living in rural areas. In this period, many governments in Africa quickly launched educational radio, television, and online programs. Despite these favorable initiatives, however, only 34% of learners have internet access at home.

About 89% of learners don't have a household computer. All these impossibilities make digital disparities a major obstacle to the continuity of learning.

The increasing interest in using technology to strengthen education systems offers the opportunity to redesign the future of education for the African continent through different intersectoral partnerships, and Africa 2063 is being built on the goals of the Continental Education Strategy for Africa (CESA). *Source: UNESCO*



Great Interest in the Yunus Emre Institute's Test for Turkish Language Proficiency

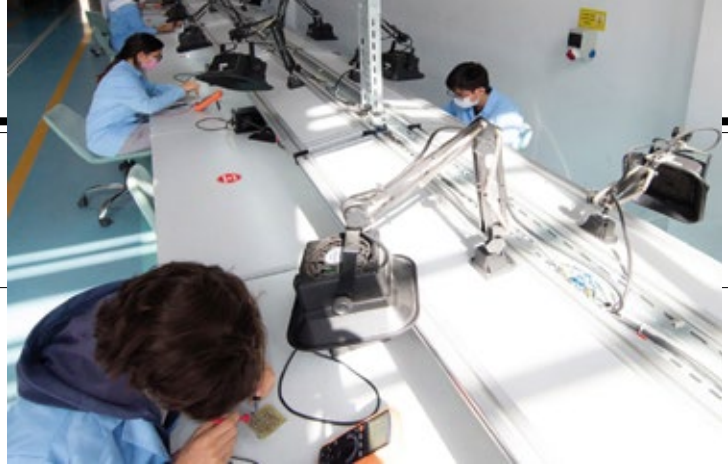
The Turkish Proficiency Exam (TPE), which the Yunus Emre Institute (YEI) conducted simultaneously in 36 countries and 40 centers, was taken by 1,639 people.



According to a written statement from the Yunus Emre Institute (YEI), the Turkish Proficiency Exam (TPE), an exam intended for the certification of language proficiencies of those who learn Turkish as a foreign or second language, was conducted simultaneously in 36 countries and 40 centers on May 29, 2021.

The record-setting participation level for this year of the exam was seen in Azerbaijan, as in previous years. The exam, conducted there at the YEI Center in Baku, was attended by 1,088 test takers.

The TPE, first applied in 2013, is a language proficiency test developed by the YEI Exam Center in accordance with the Common European Framework of Reference (CEFR) for Languages, intended to test the language proficiencies of individuals who learn Turkish as a foreign or a second language, facilitate the Turkish language gaining international recognition, and support policies that encourage the acceptance of foreign students. Those who are awarded a Turkish Proficiency Certificate by successfully passing the exam are exempted from enrolling in preparatory language classes upon gaining acceptance to university education in Turkey.



45%
Proportion of female academics in Turkey

The Ministry of National Education's NEW PROJECTS ON VOCATIONAL EDUCATION

The Turkish Ministry of National Education, which has overseen significant changes in vocational education in recent years, attaches great importance to training the human resources that are needed by the labor market.

Deputy Minister of National Education Mahmut Özer made statements about vocational education during his visit to Bursa. Emphasizing that they train the labor force required in the labor market through vocational education, Deputy Minister Özer said, "By its nature, vocational education needs to have strong ties with the labor market. However, these ties should cover the whole education process, not only the periods after graduation. This is the most important issue we are focusing on in our Ministry."

SPECIAL IMPORTANCE ATTACHED TO R&D STUDIES IN VOCATIONAL EDUCATION

Noting that they also invested in R&D studies in the context of vocational education, Özer said: "We took an important step in 2019 for carrying out vocational training and projects on intellectual property rights together in our country. In the first six months of 2021, we provided a financing source of 6 million lira for such projects. This support will gradually increase. In R&D centers, very important projects will be carried out to increase the production capacity of our country."

YÖK Is Establishing an Institute to Investigate International Genocide and Crimes against Humanity

The Turkish Council of Higher Education (YÖK) has launched efforts to establish an International Institute for Genocide and Crimes Against Humanity within the university framework for the conduction of research on genocide and crimes against humanity. YÖK officials have pointed out that various practices that could be considered within the scope of the concept of genocide or crimes against humanity, which have been implemented by imperialist states in various periods of history, still continue to be implemented in certain regions. They have drawn attention to the fact that the history of humanity has witnessed many such policies of these imperialist countries that constituted crimes against humanity, such as ignoring the sovereign rights of the peoples living in the lands that were occupied and exploited; massacring, exiling, and assimilating those people; forcing them to change their languages; and interfering with their religious lives and treating them cruelly.

YÜKSEKÖĞRETİM KURULU

Crimes committed in the past or currently being committed anywhere in the world by these countries will be addressed by the institute in an academic manner on the basis of science and law, and then the results of this research on crimes against humanity will be put into report form and shared with the national and international public. Scientific support will be given by the institute to the countries that request it, where both Turkish and foreign academics will work. Human resources of the "YÖK 100/2000 PhD Project" will also contribute to this institute.

The Ratio of Female Professors in Turkish Universities Has Surpassed the European Average

According to data from the Council of Higher Education (YÖK), the proportion of female professors in Turkey, at 32.5%, has surpassed that in EU countries (20.8% on average) and has caught up with that in the USA (32.5% on average).

The total number of academics, which was 74,134 in 2003, reached 180,065 in 2020. Among these academics, 98,404 were men and 81,661 were women. The rate of female academics among the total number of academics thus exceeded 45%. Among these academics, 10,011 were female professors, 7,190 were female associate professors, 18,736 were female assistant professors, and 45,724 were female lecturers.

According to a report published by the European University Association, the percentage of female rectors in the 48 member states is 15% on average and there are no women in this position in 20 of those countries, while there are 17 female rectors in Turkey.

Source: https://www.yok.gov.tr/Sayfalar/Haberler/2021/turk-universitelerindeki-kadin-profesor-orani-avrupa-ortalamasini-gecti.aspx







Cyberbullying Is No Joke

According to the results of the research conducted by Dr. Yeşim Yurdakul from the Department of Child Development of the Ankara University Faculty of Health Sciences, among findings that formed the basis of her doctoral thesis, young people who have just entered puberty in particular seem to fail in developing adequate awareness about cyberbullying. In addition, young people are not well equipped to deal with this kind of bullying.

According to her research, more than half of the participants between 12 and 14 years of age believed that cyberbully is committed as simply a joke. Another prominent reason for cyberbullying was reported as the desire to take revenge.

THOSE WHO HAVE JUST ENTERED PUBERTY ARE MORE EXPOSED TO CYBERBULLYING

Based on the data she obtained during her research, Yurdakul states that adolescents 12 to 18 years of age are involved in cyberbullying intensely as the bully, victim, or observer, but cyberbullying reaches its highest levels among those 12 to 14 years of age.

MORE THAN HALF OF THE VICTIMS KNOW THEIR BULLIES

Unlike peer bullying, which can be considered more traditional, cyberbullying can be done anonymously. The fact that it is quite common for people to communicate anonymously with others on social media may lead to the presumption that the victim and the bully do not know each other, but that's generally not the case. According to the results of Yurdakul's research, more than half of adolescents cyberbullied their friends or acquaintances. In addition, considering cyberbullying, the victim's experiences become distant from the physical dimension and they are witnessed by many more people. Being victimized in the sight of hundreds or maybe even thousands of people causes a lack of self-confidence and introversion in adolescents.

https://www.hurriyet.com.tr/egitim/siber-zorbalik-saka-degil-41820367

Robots Can Help Autistic Children Improve Their Social Skills

Researchers from the Massachusetts Institute of Technology have developed an artificial intelligence application for robots that can be used to treat children with autism. Previous studies revealed that robot-assisted therapies are helpful for children with autism. Researchers from the Massachusetts Institute of Technology developed an artificial intelligence application for robots that can be used for this purpose. Scientists from the University of Luxembourg designed a robot called QT for the same purpose. Researchers tried to determine whether the robot could be used as a socially assistive robot, evaluating the focusing skills and repetitive behaviors of children with autism. The study enrolled children with autism between 4 and 14 years of age. During the tests, children with autism had a short conversation with a human and with QT. The results showed that the children with autism enrolled in the study directed their gaze more toward the robot than toward humans and that their repetitive behaviors such as hand flapping were less frequent during interviews with the robot compared to their repetitive behaviors during interviews with humans.

It is thought that therapies that involve the use of socially assistive robots can help children with autism improve their communication skills and reduce their learning problems.

Source: https://oecdedutoday.com/educating-healthy-happy-children-digital-age/

School Readiness Is as Important as the Age of Starting School

It is not enough for a child to simply be of school age to start school. Prof. Dr. Müge Artar from Ankara University's Faculty of Educational Sciences emphasizes that age alone should not be considered as a level of maturity for a child's entry to school and that the concept of "readiness," which enables us to determine whether a child is ready for school or not, should be defined carefully.

Artar lists the problems that children who start schooling early are likely to experience as follows:

- Cognitive problems and inattention
- Psychosomatic problems from the beginning of school, accompanied by symptoms of hyperactivity and restlessness, social problems, and adaptation problems
- Problems with the observance of school and classroom rules
- Inability to make friends; being timid and fearful combined with impulsive problems due to not knowing how to make friends, such as disturbing others and interrupting the words or activities of others
- Emotion-regulation problems, such as proneness to crying, excitability, short temper
- Unwillingness to study at school, difficulties with homework and studying, poor attention span, inability to follow directions, poor reading and math skills

Source: https://www.milliyet.com.tr/egitim/kucuk-yasta-baslayanlar-egitimden-soguyabiliyor-6516461



Digital Competency Training for 25,000 Young People

The "21st Century Digital and Career Competencies Program" launched by Microsoft Turkey in cooperation with the Ministry of National Education and the Turkish Employment Agency (İŞKUR) is intended to improve the digital competencies of young people between 18 and 30 years of age, facilitating their employment. A total of 25,000 young people in Turkey's 81 provinces will be able to access a 30-hour free training program consisting of 6 modules.

This "21st Century Digital and Career Competencies Program" carried out by Microsoft Turkey in cooperation with the Ministry of National Education and İŞKUR will improve the digital competencies of young people aged 18-30 and facilitate their employment. Young people of these ages who attend the courses to be given through public education centers in all 81 provinces throughout the year will encounter 500 instructors as well as leaders of the private sector.

Within the scope of this course, consisting of a program of about 30 hours, many topics from digital literacy to the basic software programs used in business life are discussed.



The Whiz Kids Project ranked 1st in an international competition

Turkcell's Whiz Kids Project ranked 1st among 1270 projects from 126 countries that competed in the World Summit on the Information Society (WSIS) Awards, which have changed the lives of more than 100,000 gifted children in 5 years.

The Whiz Kids Project [Zeka Gücü Projesi] was the winner in the e-learning category of the WSIS Awards, which award projects that benefit from the power of information and communication technologies all around the world. This year, 1270 projects from 126 countries competed in the WSIS Awards, which encourage countries to improve their IT infrastructures.

41 PROVINCES, 59 LABORATORIES

The Whiz Kids Project, launched by Turkcell in cooperation with the Ministry of National Education in 2016 for gifted students, is the only such project in Turkey, supported by in-class training and reaching children as a mobile application.

Within the scope of the project, thousands of students were given access to training on artificial intelligence, coding, space sciences, robotics, and smart home and cloud technologies through online courses and 59 laboratories were established in 41 provinces.



Re-imagine Education

The world is facing a learning crisis. Millions of children and adolescents are unable to develop the skills they need to escape poverty. More than half of the world's children and adolescents are on the wrong side of the digital divide, deprived of access to the same opportunities as their peers in developed parts of the world.

The Cost of Inaction Will Be High

Dünya Bankası, öğrenme krizini ele almak için acil önlem alınmazsa, yeni nesil çocuk ve gençlerin yaşamları boyunca 10 trilyon ABD Doları tutarında mali fatura doğuracağı endişesini dile getiriyor.

The World Bank has expressed its concern that the next generation of children and adolescents will cost 10 trillion US dollars over their lifetimes if urgent action is not taken to address the learning crisis.

Experts point out that we urgently need to redesign education. Modern education should be reformulated in such a way as to equip young people with basic skills (reading, writing, and mathematics) as well as the skills in problem-solving, creativity, and critical thinking that they need for work, to start a business, and to participate productively in their communities. By 2030, it is necessary to provide 3.5 billion children and adolescents access to world-class digital solutions that will offer personalized learning in order to prepare them for a brighter future. **Source:** https://www.unicef.org/reimagine/education

A Game Chest from Turkey for Palestinian Children



"My Game Chest," a learning set designed by Turkey's Ministry of National Education for children who do not have access to preschool education, has now been prepared for Palestinian children.

These game chests, prepared in a way to support all developmental areas of children, will be delivered to 1000 Palestinian families and contain many materials intended to support children's cognitive and motor developments.

Ziya Selçuk, Minister of National Education, conducted evaluations on this subject and stated that tragic events had taken place in Palestine recently. "The deplorable state of Palestine is a problem and a bleeding wound of the entire Islamic world and all mankind. We all have to do our best for our Palestinian brothers and sisters and we should be more sensitive regarding what we can do for children in particular," Selçuk said.

ILLUSTRATION
HASAN AYCIN



The Early Warning Signs of Self-Harm Are Recognizable

According to researchers, the early warning signs of self-harm may appear in children almost a decade before the tendency begins.

A team at the University of Cambridge conducted a study with two particular groups that were more likely to harm themselves.

The first of the groups included young people who had difficulty in controlling their emotions while the second included young people who were more willing to take risks than others their age.

The study revealed that about one out of every six children will self-harm by the age of 14. The researchers also pointed out that self-harm was linked to a higher risk of suicide.

Dr. Duncan Astle, one of the researchers, said: "Our current way of supporting them is overwhelmed, we typically wait for problems to escalate and then intervene to see if we can do anything. We really need to shift to a preventative, proactive model."

The research team used a type of artificial intelligence to analyze data from 11,000 children born in the UK around the turn of the millennium. The artificial intelligence looked for patterns in the data to ascertain which children were more likely to self-harm, and what the risk factors were.



The first group had a long history of psychological disorders. They had difficulty in controlling their emotions, a tendency to bully, and parents with mental health problems. All of these were factors that increased the risk. Children who had suffered from emotional irregularity at the age of five were found to be at 30% to 50% higher risk than others.

Researcher Stepheni Uh pointed out that the second, much larger group was much more surprising because those young people did not show the typical traits associated with those who self-harm. The risk factors for that group were linked to risk-taking behaviors and lack of a supportive group of friends. Other factors that increase the risk of self-harm, such as poor sleep and low self-esteem, were found to exist in both groups.

The researchers also stated that the findings provided important data for intervening and reducing the chances of children self-harming.

Programs intended to boost children's self-esteem, anti-bullying measures in schools, and advice on improving the quality of sleep could reduce self-harm later in life.

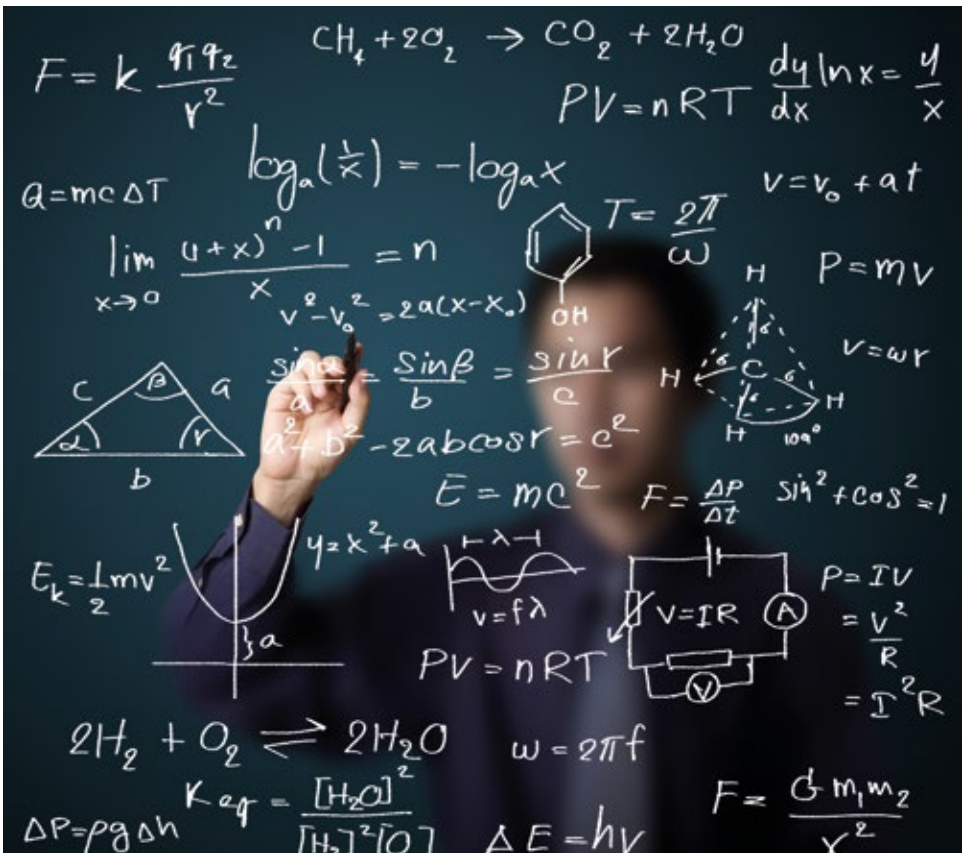
While there is higher awareness about mental health than there was in the past, another important result reflected in the data obtained from this research was that many young people who self-harm do not have enough information about the strategies and methods that could be helpful before they hit a crisis point.

Source: https://www.bbc.com/news/health-57468584

Math for an Active Brain

Researchers at the University of Oxford revealed that those who stopped studying math after obtaining their General Certificates of Secondary Education had less gamma-aminobutyric acid, a chemical crucial for brain plasticity, compared to their counterparts who continued studying math after 16 years of age..

Huriye Merve Emiroğlu



The reduction in the secretion of this compound, which works as a neurotransmitter, or a chemical that provides for communication between neurons or between a neuron and another type of cell, is found in a key area of the brain that supports numeracy, memory, learning, reasoning, and problem-solving.

More than 130 students between 14 and 18 years of age took part in the study, which was conducted by researchers from the university's department of experimental psychology. Students over 16 years of age were asked if they had stopped studying math, while younger students were asked if they were planning to stop studying math.

Each student was then subjected to a brain scan and cognitive assessment, with follow-up conducted 19 months later. According to the article published in the Proceedings of the National Academy of Sciences, researchers managed to identify those who did or did not study math after 16 years of age based on the concentration of gamma-aminobutyric acid in each student.

The researchers, who also found that the amount of this brain chemical predicted changes in mathematical attainment about 19 months later, concluded that there were no differences in the levels of the chemical before the adolescents stopped studying math.

> "Adolescence is an important period in life that is associated with important brain and cognitive changes. Sadly, the opportunity to stop studying mathematics at this age seems to lead to a gap between adolescents who stop their math education compared to those who continue it."

Professor Roi Cohen Kadosh, a cognitive neuroscientist at Oxford who led the study, said: "Adolescence is an important period in life that is associated with important brain and cognitive changes. Sadly, the opportunity to stop studying [mathematics] at this age seems to lead to a gap between adolescents who stop their [math] education compared to those who continue it. Our study provides a new level of biological understanding of the impact of education on the developing brain and the mutual effect between biology and education. It is not yet known how this disparity, or its long-term implications, can be prevented."

Acknowledging that not every adolescent enjoys math, Kadosh continued by saying that alternatives with the same effect should be investigated, including training in logic and reasoning, which engage the same area of the brain as math.

Source: https://www.theguardian.com/education/2021/jun/07/studying-maths-beyond-gcses-helps-brain-development-say-scientists

A Disease of the Time: Virtual Meeting Fatigue

Digital meeting fatigue is defined as a type of disorder that develops in individuals who communicate too much via video communication software. During the pandemic period, when business meetings and courses were mostly held online, many screen-related disorders came to light. ***'Virtual meeting fatigue'*** *is one such disorder.*

Prof. Dr. M. Engin Deniz, Dean of the Yıldız Technical University Faculty of Education, together with his colleagues, conducted a study on this topic with university students in Turkey. The 470 university students enrolled in the study were found to be highly suffering from virtual meeting fatigue. According to the findings of the study, the depression levels, anxiety levels, and stress levels of the participants were closely associated with virtual meeting fatigue. Fatigue in the online environment also has effects on the emergence of negative psychological conditions in real life. According to the study, approximately 29% of the participants' depression levels were explained by anxiety, 19% by stress, and 25% by virtual meeting fatigue. In addition, virtual meeting fatigue has the potential to negatively affect life satisfaction and academic success.

The importance and use of virtual meetings began to increase as people began to work and study more online. The approximately 3 million hours of courses given via Zoom in the past month alone highlights the severity of the fatigue faced.



FOUR CAUSES OF VIRTUAL MEETING FATIGUE

Jeremy Bailenson, professor of communication at Stanford University, examined the psychological consequences of virtual meetings, which make people feel tired:

MIRROR EFFECT

In many video meeting apps, participants see themselves constantly. It's like having a mirror in front of your face all the time, and people tend to be more critical of themselves when they see themselves.

THE FEELING OF PHYSICAL CONFINEMENT

The camera lens limits our range of motion during meetings, but the freedom to move our body is strongly linked to creativity and learning.

THE FEELING OF BEING WATCHED

In a virtual meeting, the screen is full of faces and they all look as if they are staring at us. In traditional meetings, on the other hand, we only feel like the subject of attention when we have something to say.

INCREASED EFFORT FOR SELF-EXPRESSION

When we meet someone in real life, we intuitively understand each other's body language. In virtual meetings, we exert more energy to clearly communicate that we want to speak or that we agree with someone on the one hand, and to interpret other people's body language as seen on the screen on the other hand.

What Can You Do for Your Child's Emotional Development?



Whether you get along well with your children or you have challenges, it is important to show that you love and support them, that you can help them in tougher times, and that you are always there for them.

It can be helpful to keep the following rules in mind while having daily conversations with your children and showing that you are always there for them:

1. ENCOURAGE THEM TO SHARE THEİR FEELINGS

- Look for ways to check in with your children every day. Ask them how their day was and what they did. You can invite them to join you in a task, such as preparing dinner, so that you can spend the time together chatting about their day.
- Remind them that you are there for them under any circumstances, and that you want to hear how they are feeling and what they are thinking. A few simple words of encouragement can enable them to feel comfortable sharing their feelings with you.
- It is important to acknowledge and understand the emotions that they might be experiencing, even if they feel uncomfortable. When they pour out their hearts, you can respond by saying "I see," "that sounds like a challenging situation," or "that makes sense."

Be honest and transparent with your children. You can let them know how much stress you are experiencing. You can share with them your own experiences in coping with emotional problems that seem unsolvable.

- It can be easy to notice the behaviors of your children that you don't like. The main goal is to see their good behaviors, as well. Notice and encourage children's good behaviors.

2. TAKE THE TIME TO SUPPORT THEM

- Work together on determining new routines and achievable daily goals. For example, you can set a goal such as getting homework done before dinner.
- Adolescents may sometimes want to act independently. Try to provide your children with the appropriate time and space to be on their own. Their need for time allocated for themselves is a normal part of growing up.
- Guide and support your children in allocating time for doing things that they enjoy, things other than schoolwork, housework, and other duties. If your children feel angry, work with them to solve their problems - but never take over their problems.

3. OVERCOME CONFLICT TOGETHER

- Listen to your children's views and try to resolve conflicts calmly. Remember: everyone gets stressed!
- Never discuss an issue when you are angry. Walk away, take a deep breath, and calm down. You can talk with your children about it later.
- Avoid power struggles. No matter how difficult it is at that moment, empathize with your children to take control during critical processes, rather than trying to fight back or overwhelm them.
- Be honest and transparent with your children. You can let them know how much stress you are experiencing. You can share with them your own experiences in coping with emotional problems that seem unsolvable. This can help them understand that the emotional intensity they are experiencing is something normal.
- When there is a disagreement, take some time to resolve it. Discuss your ideas with your children so they see how you are processing ideas.

Source: UNICEF

The Number of Children Trapped in Child Labor Has Risen to 160 Million Worldwide

According to the International Labor Organization and UNICEF, the number of children subjected to child labor worldwide increased by 8.4 million in the last four years, reaching 160 million, while 9 million additional children are at risk due to the impact of the COVID-19 pandemic.

WORLDWIDE,

160

MILLION

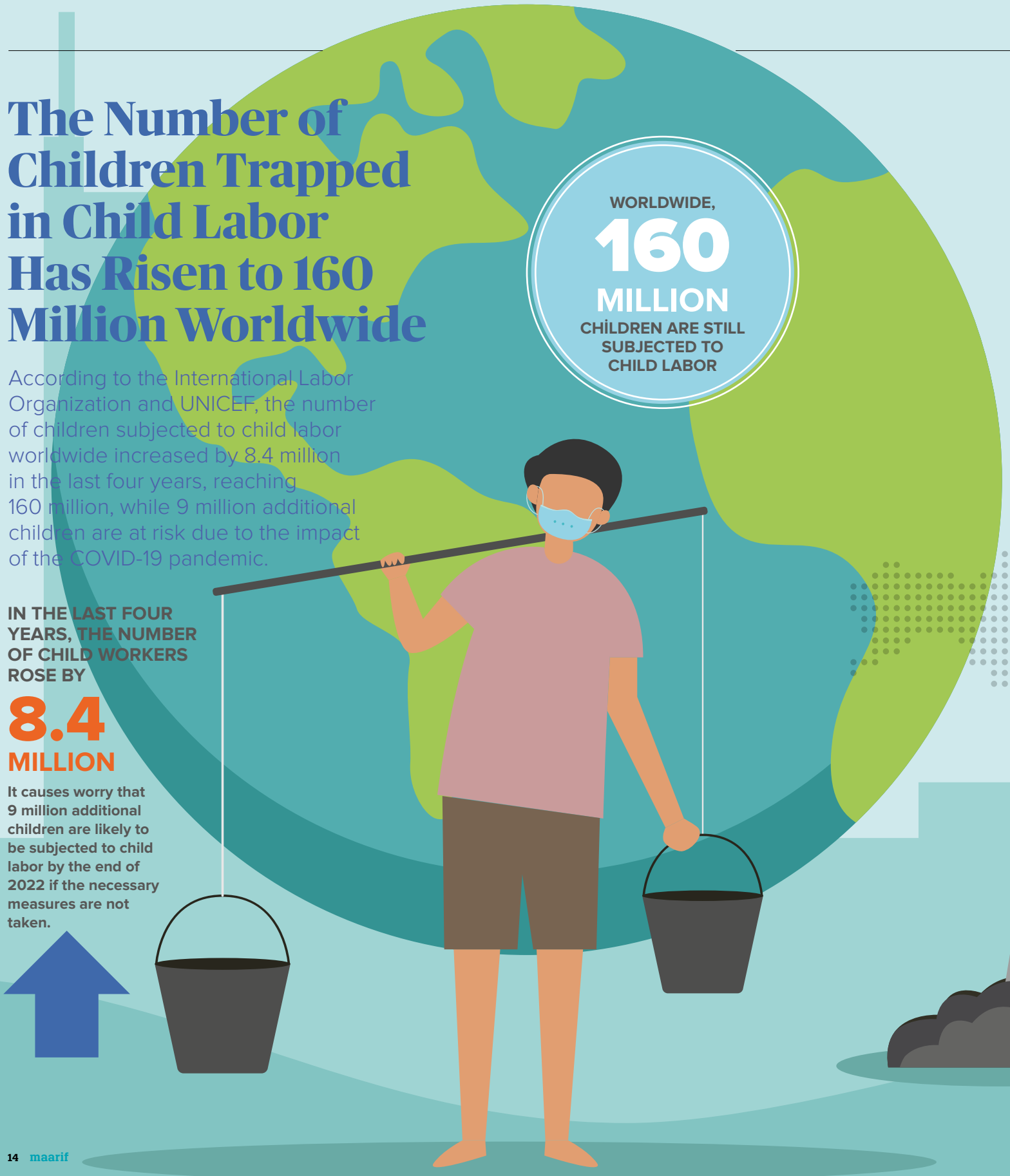
CHİLDREN ARE STILL SUBJECTED TO CHILD LABOR

IN THE LAST FOUR YEARS, THE NUMBER OF CHILD WORKERS ROSE BY

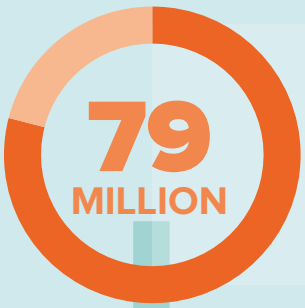
8.4

MILLION

It causes worry that 9 million additional children are likely to be subjected to child labor by the end of 2022 if the necessary measures are not taken.



THE NUMBER OF CHILDREN AGED 5 TO 17 YEARS EMPLOYED IN HEAVY AND DANGEROUS LABOR



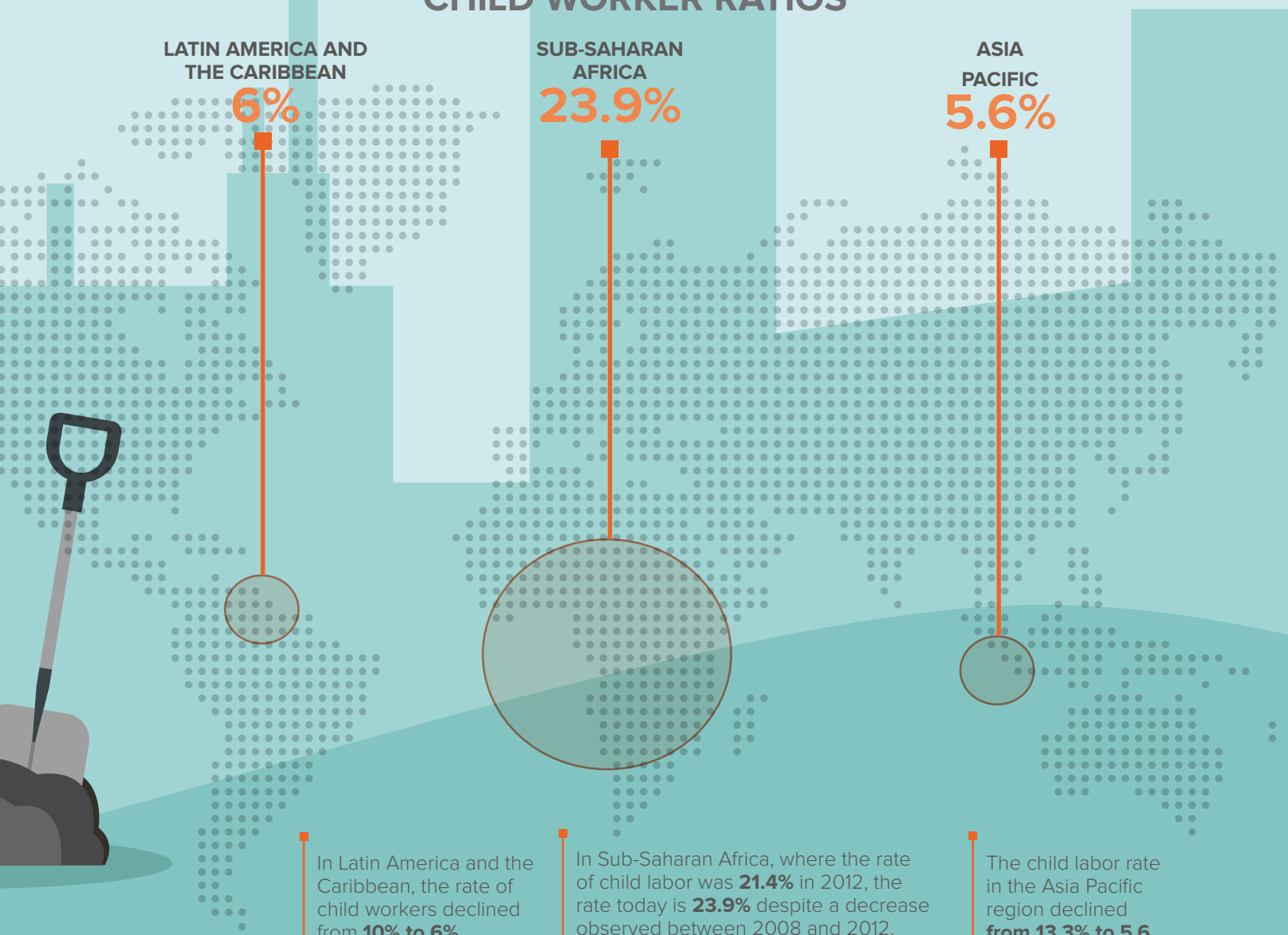
28%
Proportion of children aged 5 to 11 years who don't go to school

35%
Proportion of children aged 12 to 14 years who don't go to school

PROPORTION OF CHILDREN WORKING WITH THEIR FAMILIES



CHILD WORKER RATIOS



In Latin America and the Caribbean, the rate of child workers declined from **10% to 6%.**

In Sub-Saharan Africa, where the rate of child labor was **21.4%** in 2012, the rate today is **23.9%** despite a decrease observed between 2008 and 2012.

The child labor rate in the Asia Pacific region declined **from 13.3% to 5.6.**

Source: UNICEF

PAGE EDITORS
Menekşe Olgun, Asuman Bağran, Enes Tecim

Books That Will Change Our View of Education

Education has been at the top of our agenda recently. People all over the world are more interested in the problems of education and the possible solutions. Moving education activities online to a large extent during the COVID-19 pandemic has also played an important role in this. As a result, educators, students, and particularly parents feel the need to closely follow developments in education. In this fourth issue of our journal, we have compiled a collection of publications for you that will help you obtain different perspectives on education.

Enjoy your reading!

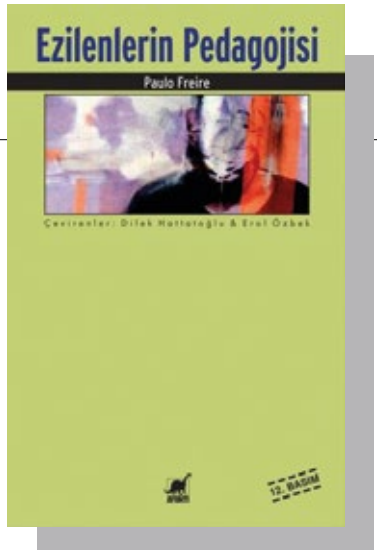
PEDAGOGY OF THE OPPRESSED
PEDAGOGIA DO OPRIMIDO

Author: Paul Freire (original language: Portuguese)

Translated into English by: Myra Ramos

Translated into Turkish by: Dilek Hattatoğlu and Erol Özbek (Ezilenlerin Pedagojisi)

Published By: Ayrıntı Yayınları



The book *Pedagogy of the Oppressed,* written by Brazilian educator Paulo Freire, who introduced the concept of the "banking model of education" to the educational literature, starts by explaining the reasons for the pedagogy of the oppressed. The author states that the oppressor consciousness tends to transform everything surrounding it into an object of its domination. He also emphasizes that oppressors objectify the oppressed, saying that the oppressor consciousness reduces everything, including the earth, land, production, things created by people, people themselves, and time, to the status of objects at its disposal.

Citing the banking model of education as a tool for suppression, he states that the teacher is adopted as the depositor and students as the depositories. In doing so, he establishes an analogy between students and banks, indicating an understanding that considers knowledge as an investment tool. He criticizes the understanding of education under the domination of the oppressor, saying that students, like tellers in banks, receive information on various subjects and spend it when necessary.

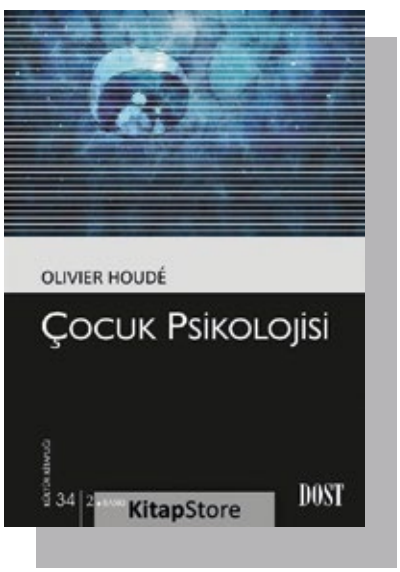
He emphasizes that the banking model of education is an obstacle to human development: "The capability of banking education to minimize or annul the students' creative power and to stimulate their credulity serves the interests of the oppressors, who care neither to have the world revealed nor to see it transformed." While summing up his ideas in the last chapter, he offers a deep analysis on "dialogue," emphasizing that a word is something that changes the world beyond being just a tool for dialogue. Dialogue highlights the need for love, humility, hope, and faith in the words of people – that is, in their communication.

ÇOCUK PSİKOLOJİSİ
LA PSYCHOLOGIE DE L'ENFANT

Author: Olivier Houdé (original language: French)

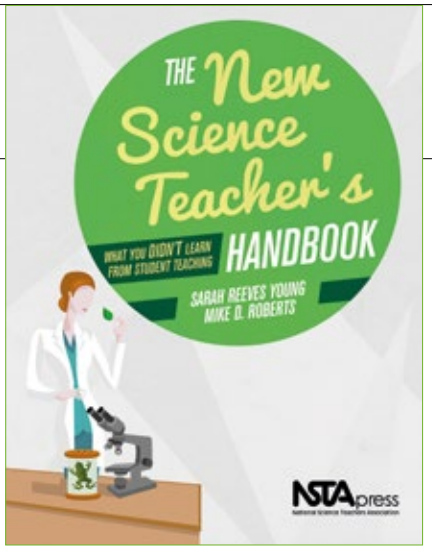
Translated into Turkish by: İsmail Yerguz

Published By: Dost Kitapevi



The findings of recent research on the development of intelligence and the brain have led to a radical change in the existing knowledge, theories, and assumptions about child psychology, so much so that many scientific findings that broadened the horizon of the field were revealed after Jean Piaget's studies in the field of cognitive development. Data from cognitive research and examinations have shaped developments not only in the field of child psychology but also in the whole field of cognitive research.

Professor Olivier Houdé, head of the team studying mental skills and mental development at Sorbonne University, calls Piaget's mental development model the "staircase model of development," saying that each step of Piaget's cognitive domain corresponds to a development. Houdé explains that mental development in children is not like a straight line according to new research and theories, and he puts forth the argument that sometimes changes and regressions occur in the child's cognitive development by making reference to research. This book, which serves as a guide to child psychology, consists of five chapters under the headings of "Relationship Between Nervous System and Cognitive System," "The Creation of Objects," "Numbers and Categorization," "Logical Thinking," and "Psychologist Child."



THE NEW SCIENCE TEACHER'S HANDBOOK

Author: Sarah Reeves Young and Mike Roberts

Published By: NSTA Press-2015

This book aims to help you become the teacher you've always wanted to be. It also gives the reader advice on topics such as coping with cranky parents, organizing the jungle of science materials left behind by predecessors, and making grading more manageable.

The New Science Teacher's Handbook offers 12 specific steps that will help you on your way to becoming a skilled classroom teacher. The book's chapters include the story of a struggle from the authors' own experience, the moral of the story, steps taken to overcome the struggle, the potential effects of success for you and your classes when you follow these steps, and resources for further reading.

EDUCATION AND THE SOCIAL ORDER

Author: Bertrand Russell

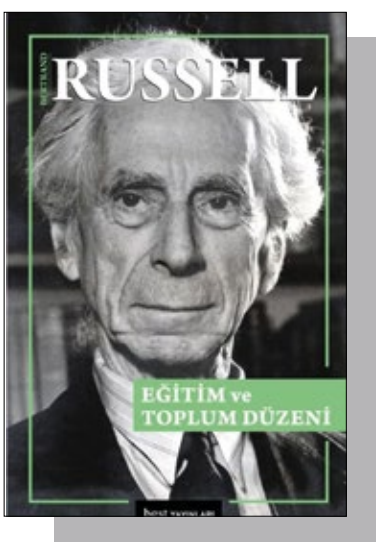
Translated into Turkish by: Şebnem Duran

Published By: Routledge

What are the aims of education? Questions such as why education is given and what kind of education should be given constitute the basic questions about education at all times. In his book *Education and the Social Order,* Russell questions the role of education in the setting of human existence by asking the same questions.

Stating that the aim of education should be civilization, he conceptualizes civilization with both an individual and a social definition. Saying that we live in a society that requires cooperation and that the minimum required information about science and practice should be given through education, he emphasizes the necessity of cooperation between education stakeholders. After saying that it is necessary to establish a balance between these stakeholders, the author explains what kind of balance that should be. He discusses many basic topics such as discipline, heredity, talent, class discrimination, competition, patriotism, bureaucracy, religion, economics, and sexuality in education for the formation of a good society.

In the book, he states that too much authority over students makes them either submissive or rebellious. In his words, "the educators...tend to become sadistic disciplinarians, glad to inspire terror, and content to inspire nothing else. As these men represent knowledge, the pupils acquire a horror of knowledge, which...is supposed to be part of human nature, but is really part of the well-grounded hatred of the authoritarian pedagogue."





YOUTH ONLINE

ÇEVRİMİÇİ GENÇLİK

Author: Seyfullah Şenel

Published By: Vadi Yayınları

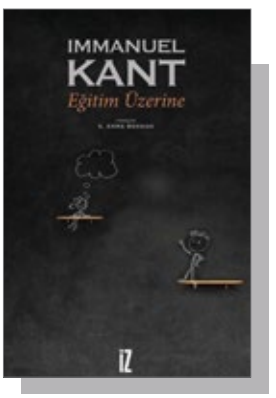
Where are you online?

According to research, internet users spend 6 hours and 43 minutes per day online, and the average daily time spent on social media is 2 hours and 24 minutes. Multiplying these figures by 5 billion internet users enables you to better understand the magnitude of the time spent on the internet.

There is a question that we should ask ourselves before this virtual world that claims half of our lifetime traps us in its realm:

"Where am I online... in a virtual or real world?"

Once you've answered, we can start.



ÜBER PADAGOGIK

Author: Immanuel Kant

Translated Into Turkish by: S. Emre Bekman

Published By: İz yayıncılık

Also available in English from various publishers as The Educational Theory of Immanuel Kant, this work presents the notes written by Immanuel Kant as an educator, whom we know as a philosopher, or rather, it presents the notes written by him within the scope of the university lectures that he gave in the last years of his life.

Immanuel Kant's series of opinions on education can be characterized as neither a complete theory about education nor an evidence-based philosophical doctrine. However, they shed light on several important issues that may be paraphrased as follows:

A human can become a real human only through education. He or she is nothing more than what education has made. It should be remembered that a human can only be educated by humans, who had been educated by other humans. Normally, parents merely educate their children in such a way that, no matter how bad the world may be, they can adapt themselves to its present conditions.

However, the education being provided should be much better than this, in order to bring about a better state in the future. Here, however, we face two hurdles:

1) There is only one thing that parents usually care about: their children's success in life. 2) Sovereigns (i.e., parents) consider their servants (i.e., children) merely as tools for their own purposes, but from whom should we expect a better world... from servants or from princes?

Alev Alatlı

"You Can't Know Yourself Without Knowing About the Other"



If this planet will survive, it will do so thanks to people who have not been processed on the workbench of the Enlightenment. You do need to know what the Enlightenment is. Remember that in order to be able to describe yourself, you need to describe the other first.
No lines can be drawn otherwise...

Prepared by: **Zekeriya Güneş**



"*Gogol'un İzinde: Rusya* ["In the Footsteps of Gogol: Russia"] is a 4-volume written work set in the background of Russia. I was awarded the Sholokhov Prize for those books. This is Russia's Nobel, a very important, hundred-year-old prize in literature. Sholokhov was the only person in the world who received the Lenin, Stalin, and Nobel prizes. Turkologists in Russia called that written work Russia's *Viva la Muerte*. Indeed, it is a work written with such a thought in mind. I would argue that Russia cannot be comprehensible without reading the book series *Gogol'un İzinde*. For me, my most honorable award was the Grand Award in Turkish Literature given by the President of the Republic of Turkey in 2014. It was very important to me, and let me tell you why: I'm a "let the state be in charge, or let the raven land on the carcass" kind of person (*devlet başa kuzgun leşe:* a proverb embraced by advocates of state control), not a liberal. I am one of those who say "Turkey first," and maybe this is why that award is very important to me.

There is also a medal that I received from Yasser Arafat. Yasser Arafat was in exile in Tunisia in 1986. Along with this medal, he also sent me an embroidered Palestinian dress made in Tunisia. For years, I wore that dress during TV programs about Palestine. Of course, what I did for Palestine was something different, but I've never intended to go to Palestine and fight shoulder to shoulder with my revolutionist friends, because I couldn't believe that would work. Instead, I've dedicated two and a half years of my life to volunteer translation work. I've done that because, in addition to its basic problems, Palestine also has a language problem with its books. For example, it was a period when the issue of Palestine needed to be heard in Turkey, and therefore the books had to be translated. So, I started a study by considering their specific needs. It was an effort that I was honored to undertake. As I'm not such a person who wants to appear in the media with medals, my activities like these are barely known. "Do good, cast the fish's food upon the waters. Even if the fish doesn't appreciate it, its creator does!" I've always believed in this. You must believe, as well.

LABOR NEVER GOES DOWN THE DRAIN

God doesn't abandon those who serve Him. I know this from experience. Labor never goes down the drain. I know that things that look like futile effort or look like rowing against the tide are actually not like that at all. Sometimes we may row against the tide, but we need to use our minds and get out of that situation in time. **"Prevent loss,"** foreigners say. It is necessary to estimate carefully where we need to stop, and we must learn to say no. Otherwise, you can drift with the tide. We should not act like that.

I am the daughter of immigrant parents. We are Macedonian Turks. We are the children of Mehmed the Conqueror. From generation to generation (who knows how many generations), my father's ancestors had always served as soldiers in border units. We are among those who migrated in 1912, that is, long before the years of population exchange. When you migrate, you leave everything behind. My great-grandmother came with four children. Bulgarian bandits informed on the father of my paternal grandmother. He came, he performed the salaat [the ritual prayers of Islam], he shot his horse, and then shot himself to death. After that, my great-grandmother, who was then heavily pregnant, set off on her journey to Turkey with her children. My aunt was born during the journey, in Dama, Greece. We've lost an estimated five million people according to one study, and three and a half million according to another. I know this from my own family. Until very recently, I had no relatives buried in the same cemetery because all our relatives were buried where they were born or died during the migration process. This is a topic that we constantly cover up and don't dwell on. Only Ömer Seyfettin wrote stories on these issues. He died in 1920, before the War of Independence. His stories have been ignored in Turkey. Ömer Seyfettin wrote the truth, but we don't want to see it. In a sense, we are right, because we need to look ahead. This approach could be correct, but if you don't know what has happened to you, you can't take action in time. Maybe that's why we, those who have migrated from Rumelia, are highly nationalistic, tougher, and temperamentally high-strung. I always see the glass as half full. Once I see that, I say "how nice, there's water here," instead of saying "why didn't you fill this completely?" In fact, this is the general Turkish attitude, which keeps us alive... but only to a certain extent.

WHAT IS EAST? WHAT IS WEST?

I want to speak on the basis of some other concepts. I think I know what work you do. First, find a place for this question in your mind: "What is East and what is West?" What is Eastern civilization, and what is Western civilization? Now, you will see that there is no such thing as East-West. I'm not making up a definition just based on the roundness of earth. Truly, there's no such thing as East-West. So, what is there instead? **There are people who have been processed on the workbench of the Enlightenment and those who have not.** I mean the Western European Enlightenment. If you have been processed on the workbench of the Enlightenment, you can find Westerners in Kamchatka, too. You can find them wherever you do missions, such as Somalia, Chad, or Madagascar, as well as in China or Turkey. I care a lot about this. I don't classify people based on geography or race. A man who performs salaat

Alev Alatlı, who is also the Chairwoman of the Board of Trustees of Cappadocia University, is engaged in education on a practical level.

five times a day could be the type of Westerner that you can discuss nothing with. Those processed on this workbench are always in a kind of alliance. Watching them from the outside makes you tired and you often misinterpret this situation. For example, you can accuse those people of being traitors. In fact, they have always been there, but you didn't notice them.

So what is this workbench of the Enlightenment like? What we call enlightenment is a process that had been started by Copernicus, Galileo, and Isaac Newton. So why does it matter? First of all, you take God from the center of the universe, and you replace Him with the human. This is what you do. Replacing Him with the human means that the reason for doing any action is no longer because God wants you to do it; you think that the human mind alone is adequate to bring goodness to our world. Subsequently, it becomes possible for you to syllogize, asking questions such as: "Does a man who is mentally healthy throw himself into Lake Çekmece intentionally? Does a mentally healthy man shoot himself in the foot?" You make the human mind the only tool of measurement. The people who paved the way for this were those fed up with the Catholic Church, such as Voltaire and Diderot. They were definitely right to be fed up with the Catholic Church. Imagine a man who wants to join the Crusades, with the intent of fighting the barbarian Turks. To do that, he has to pay dues to the Church. I guess you've never thought of this. First he deposits money, and then he joins the battle... but why? There's a price for going to heaven, in case he dies in the battle – it is the fee for heaven that he has to pay to the pope. These are things beyond our imaginations that our minds can't comprehend. Now such men are leaving the Church, saying "enough is enough," and this is inevitable. The God of Muslims is not the God of Christians. Pay attention to this. The God of Christians is different. The God of Muslims is not the God of the Jews. They are all different in practice. The God of the Jews, for example, is a fascist typology of deity. He bullies, overwhelms, and oppresses without limiting himself. I would advise those of you who work in Westerns countries not to go anywhere before reading the Old and New Testaments. We need to know about it. Just get it and read this short book. See what the Lord Yahweh said to whom, and what the origins of the Israeli attitudes are. Some Christians, on the other hand, open the Old and New Testaments together in the church every Sunday. So how did they achieve the integration of these two, causing the emergence of the Neocons? The Neocons married Lord Yahweh to Jesus. You need to know this.

PEOPLE WHO HAVE BEEN PROCESSED ON THE WORKBENCH OF THE ENLIGHTENMENT AND THOSE WHO HAVE NOT

Religion is magical. You can't surpass the magic of religion. No matter how Western you are, you need to have a religious reserve. Therefore, they try to make it easy to swallow. So there are two types of people in terms of mentality on this earth: people who have been processed on the workbench of the enlightenment and those who have not. We are the ones who have not been processed on that workbench. We are the Asian tribes... Some of us later became Muslims, while some of us did not, but all the Asian, African, South Asian, and Central Asian tribes are people who believe that there is a creator and an owner of the universe, so they are people who do not consider themselves as another god besides that creator. They are not people who attempt to displace the creator. This is a very, very big difference. This is because there is nothing you can't do if







you are the creator of the universe. I mean, if you are the creator, all kinds of things become permissible for you. However, this is the root of the problem, because you shouldn't think that you're the *Ashraf-i Mahlukat* [the most honorable creature] responsible for other creatures. This is why the West has gone too far in science. Edison is also the man who invented the first electric chair intended for execution. Do you know how he performed the first experiments? By tying countless animals to metal plates and burning them again and again... Can you imagine that you are doing such a thing for the sake of science? Thinking that I might be misunderstanding these guys, I began to study philosophy in the United States. Here is what I saw in their world: science is science, and it is intended to be discovered. It is normal to experience road accidents during the journey. What is a road accident in this context? An atomic bomb, artificial intelligence... and here it is coming, watch out! Artificial intelligence will kill us. Tear it off and throw away the formula, why are you still holding on to it? So, our mindsets are quite different.

A PERSON WHO PUTS HIMSELF OR HERSELF IN THE CENTER BECOMES ARROGANT

When you put humans in the center, they can be incredibly arrogant, and this arrogance is accompanied by the desire for immortality. Everyone is in a rush to look younger, as if they will never die. What is **cryonics**? If you have an incurable disease, you get yourself frozen in liquid nitrogen tanks. After the discovery of the cure for the disease, they take you out and you come back to life. Then they treat the disease and you keep living. Now, think carefully – what is this like? What kind of love for immortality is this? How can you feel good when they take you out of the tank three hundred years later? Just imagine that you have no mother, no father, no children, no wife, no lover, and no friends. Wouldn't you think "why should I live?" We think that. In the future, however, there will be a period when even this will receive a lot of applause. Think about this.

Do you know what "eugenics" is, coming along with cryonics? **Eugenics** is choosing the best of the human embryos, or choosing the people to live. It originated with the ancient Greeks, namely the Spartans. What did they do in Sparta at that time? When a woman gave birth to a baby, the council of elders inspected the baby. Babies suspected of having any weakness were thrown away. Eugenics is nothing more than that. It's a human selection process. I ask you to do two things. First, make good use of the internet, because with it, you can find everything. The second thing I ask you to do is learn how to use the dictionary. You all have a phone, so just download a dictionary and look up the word "eugenics." The story of eugenics continued. Darwin's cousin Sir Galton revived this concept. The first American Eugenics Society was founded in 1926 ... before Hitler's rise. In America, if I'm remembering correctly, sterilization was applied in 26 states. In this context, Hitler is just a scapegoat. This work had been done long before Hitler's era. There are even letters of thanks written by Hitler to the Americans. This mentality, which considers the human the master of the universe, naturally paves the way for genocides. Nobody intervened in the Holocaust. If you have a mentality that accepts eugenics, you can easily rule out anyone who doesn't fit the criteria. For example, there are dark-skinned Africans. You get rid of them first. You never have a guilty conscience. You can make up countless excuses such as healthy generations, civilization building, and so on. The infrastructure of such excuses has already been established years ago.

THE MENTALITY WE FACE

These words should not be considered as an expression of the anger that an underdeveloped nation has toward developed societies. Remember, they are the ones who are responsible for this state of this planet. We are not the ones who are depleting the ozone layer, who are drying up the forests, and who are melting Antarctica. Western civilization has not improved this planet, and that is what matters. Turkey, on the other hand, can offer new things for the good of this planet. I say this to explain what we are facing now.

I saw the slogan of your foundation: "Good people!" What does "good person" mean? Good, but whose good, and among whom? For whose sake is he or she good? They are good for the good of the planet. If this planet will survive, it will do so thanks to the people who have not been processed on the workbench of the Enlightenment. You do need to know what the Enlightenment is. Remember that in order to be able to describe yourself, you need to describe the other first. No lines can be drawn otherwise. If science puts mental effort into making a cyborg, woe to that



science! The mind manifests itself in a variety of ways. The mind of a painter is distinct, the mind of a musician is distinct, and the mind of a scientist works differently. So what about our Turkish Muslims? I would like to underline Turkish Muslims. Let me say that I don't see Islam as a whole. No such a thing as the Islamic world is possible. If you put the various understandings of Islam side by side in the library, they look dissimilar to each other. When you look at the issue in practice, you can see that the Islamic world is an artificial concept. It is as meaningful as the concept of the Christian world, or it may even be meaningless. This is an idea that came to us through orientalism. The idea of considering all people as a whole is the product of the mindset that has been processed on the workbench of the Enlightenment. How can an Anatolian nomad girl and a Sudanese girl have something in common? They have nothing in common but their belief in God. They both have surrendered to a whole, the order of the universe. However, it is not necessary to become a Muslim to surrender to the order of the universe. Know this, too. Native Americans, for example, are people who have surrendered to the order of the universe. There was a Native American chieftain whom the British cheated so badly: Tecumseh. When you read his will, you may suppose that he was a Muslim who didn't know how to say bismillah [a word used by Muslims before starting actions, which means "in the name of God"]. You have activities in Africa. However, what you do is first for yourself, not for Africa. You must know this.

"We confirm our humanity when we confirm the humanity of others." Do you know what this means? If you're not human, neither am I, automatically. None of us can be innocent in other ways. Ubuntu is the religion of the Bantu peoples of Africa and it is like an ocean. Its place of origin is where the song "none of us is innocent" becomes a reality. It sometimes reminds me of Yunus Emre. At my school in the United States, there were also students who came from Africa. Some notable people

> When you put humans in the center, they can be incredibly arrogant, and this arrogance is accompanied by the desire for immortality. Everyone is in a rush to look younger, as if they will never die.

such as Martin Luther King have studied there. It was a place infested with racists. In the university, when there was a black janitor in the elevator, a white teacher would not get into the elevator. The church there is the place from where Martin Luther King started his anti-racist march. Young people came from different parts of Africa, such as Gambia and Nigeria, for master's education. The next day they all began to wear their own traditional clothes. They never compromised on this. We understand that they wanted to be distinguished from African Americans. They were quite angry at African Americans for having been enslaved. Ubuntu is the reason why African Americans are amenable and docile. American Indians are originally from our ancestry. They couldn't get together with African Americans for any purpose. Millions of American Indians are oppressed on the one side, while millions of African Americans are oppressed on the other. In addition to their inability to form alliances, they are like enemies to each other. Just think about it... One is Ubuntu and the other is Tecumseh. They are actually the same thing. What kind of game is this?

In 1811, the British were trying to discipline the American colonies. There they did what they did in Kut. They promised freedom to slaves in the south as a reward for fighting alongside them. Five thousand slaves escaped and went north. Black men in British uniforms fought the American Indians. Afterwards, they invited the American Indians to fight alongside them, but then they let them down. They prompted the Pakistanis to fight us at Kut, and then they let them down, as well.

Think of Machiavelli... The mind of the Enlightenment is based on achieving something. Making, implementing, and finishing. It knows no boundaries. If you ask if such a thing can happen, I would say yes. It happens to you today, it happens to someone else tomorrow, it happens to someone else the next day, because that's the mentality. You can be sure that they also sell their own men. Don't think that they have a grudge against Turks only. They have grudges against anyone who conflicts with their interests. So, if Turks interfere with their interests, they hate Turks, as well.

DON'T CLAIM THAT YOU ARE GOOD PEOPLE

I'd like you to read a passage from the will of Tecumseh, the Shawnee Indian chief. It's very interesting: ***"When your time comes to die, be not like those whose hearts are filled with fear of death, so that when their time comes they weep and pray for a little more time to live their lives over again in a different way. Sing your sagu, and die like a hero going home."*** "Sagu" means death song. The sagu is present in our Central Asian tribes, as well. "Sing your sagu and go!" What an honorable act. One culture has this, while another one has the cryonics that I just mentioned. Do you see the difference? Acting in accordance with the order of the universe and surrendering to it... It also has some other names. It doesn't matter whether it is specific to Islam or not. The truth is over there, and you see how it spreads in waves. Those of you who work in African countries from Djibouti to Mauri-

tania have to know about Ubuntu, as well as the beliefs and cultures of all Zulu and Bantu people. Don't be like the arrogant Westerners who go there with the intent of bringing them civilization. Learn before coming. If you learn, you'll be much more successful and useful. Don't claim that you are good people. Nobody cares about you.

Let me give you an example of good people from history. Ireland was in a deplorable state. Starvation killed half the population. People in that country had to choose between going to America and dying in the country or at sea. Potatoes were infected with a disease and that condition lasted 50 years. Ireland was a place where people were full only when they had potatoes. In 1848, Abdülmecit wanted to send 10,000 pounds to the Irish. He let the British ambassador knew his intention. Queen Elizabeth requested him not to send more than 1000 pounds. Abdülmecit prepared 1000 pounds, but he couldn't feel at ease. He had three ships prepared and filled with potatoes, onions, and lentils, and he sent them to Ireland. The British navy intercepted the ships. They have a port called Drogheda. They worked there day and night, unloading the ships. That aid kept the Irish on their feet. Today, not a single person in Ireland remembers this event. We didn't follow up with Ireland. We just sent them aid and then left them alone. This is what I'm trying to say. What happened to Ireland? When the British realized that they could not cope with the Irish, they made the language of education English in all schools. They beat Ireland with language. They made English compulsory in all schools. Think about the state of today's Turkey. One out of every two schools in Turkey is trying to teach in a foreign language.

IN ORDER NOT TO BE A LAUGHING STOCK, WE NEED TO KNOW

Almost all young people have internet access. Please get your head out of the water and have a look at what's going on in the world. If you are unaware of the world, another problem arises. We think we are unique in terms of both good and bad things. For example, if İstanbul is under heavy snow, people begin to complain with sentences starting with "in no other city in the world..." If I hadn't been a person who couldn't leave her home for six days in Washington, maybe I would have believed it. Is this normal behavior? It is a very wrong attitude to consider ourselves unique in terms of both good and bad things. Those who don't know the world become its laughing stock. We need to know in order not to be a laughing stock. This foundation is a very, very good opportunity in this regard. It's a half-state, half-private foundation. This status opens up a very beautiful horizon for you to learn and teach, which makes it pointless for me to talk. How can a person polish himself or herself? That can be possible with knowledge. Knowledge is power. There is no power greater than the power of knowledge. You learn and then teach us. After that, it is possible to put forward value with common sense. It would not be right to declare that you will open a Turkish school in any part of the world. God knows, you will also put a statue of Atatürk and a flag in the back... Hurrah!

We will not teach them. On the contrary, we will learn from them. Chad, Djibouti, Ethiopia... The people of those countries will teach us. Aren't there things they don't know? Can't we help them? Of course we can. I thought the same thing about the Ikhwan [i.e., the Muslim Brotherhood]. If there is something we can do, it is to train the Ikhwan. Everything is easy for a man who does not know the map. If you slaughter half of the people in Cairo, the other half hear about it fifteen days later, or never. They are that detached from society and self-centered.

There were some questions in my mind about Islam that I was looking for answers to. They said: "You can find the answer in Al-Azhar." I went there. In the meantime, I met many people from the Ikhwan. First, of course, we had a mild argument. They asked my name and I said "Alev." They asked, "So what's your other name?" and I said "Alev... just Alev." They meant that I needed to have a name from the Quran. Yes, it is not from the Quran, but it is a Turkish name, and I'm a Turkish Muslim. We could hardly agree on this issue. Then I heard that the man called me "Madam." Apparently, he couldn't choose a name from the book. "What do you want me to call you?" he said. "Call me Sayyide. I prefer it to Madam," I replied. They said Atatürk had abolished the caliphate. "Well, then why didn't you gather in Baghdad in 1926 and choose one by lot?" I retorted.

There was no answer. That's the root of the problem. What were they talking about? They said, "Atatürk was a Freemason!" What happens if he was? Some of the late Ottoman caliphs were Freemasons, as well. What would you think about them? You need to think of another possibility. Freemasonry could be something different from what we know. So we must think about why such people and Freemasonry come together. It's something like this. Children, for example, know nothing about the War of Independence. They confine themselves to Wikipedia. At the university, where I'm the Chairwoman of the Board of Trustees, I make the greatest effort to prompt them to raise their heads above the water. I teach them to look straight into the eye of evil. We send our children abroad for master's degrees and doctorate degrees, but we can get nothing from them. After İsmet İnönü, there has been no Turkish statesman or stateswoman who has not sent his or her children abroad for education. Compare İsmet İnönü with others. There has always been separation and alienation. Children usually can't hold a job there. It's due to their state of mind. They feel they are second, third-class citizens and don't shoulder responsibility.

Source: Quoted from the summary of the conference entitled "Turkey for the Good of the World" given by Ms. Alev Alatlı within the scope of the "Maarif Interviews" program organized by Turkish Maarif Foundation.

DOSSIER



CHANGING QUALIFICATIONS AND EDUCATION

A great social, economic, and cultural transformation is taking place worldwide as a result of the developments in digitalization and technology. **The new world needs individuals with qualifications who can constantly renew themselves in the job market, in education, and in cultural and social life.** Today, the concept of "profession" is very flexible and it can have a variety of meanings in contrast to the past understandings of the term. It seems that we are about to step into a new world, where influential individuals will be those who can adapt to developments, have the capacity to think about and interpret their environments with an interdisciplinary mindset, and are able to make a difference. We have to achieve the necessary transformation in our education system to be able to prepare for the world of the future by educating people who have these qualities and the ability to interpret information. For this reason, we have selected **"Changing Qualifications and Education"** as the cover subject of this issue.



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Education and Educational Skills in the Framework of Qualifications

An analytical perspective is needed while building the future. We can't give sound answers to the question of how schools of the future should be without analyzing past debates on education and the function of schools.

Each passing day is simultaneously the opening of a new day. A new day is a new beginning and opportunity for some people, while for others it's something like *nihil sub sole novum*, or "nothing new under the sun." Those who open a new door for new beginnings and new opportunities are not just those who comprehend the spirit of time and adapt to change, but those who direct change. Therefore, education is a design intended for the future. It is the work of building the future by taking inspiration from the past while living in the present moment. An analytical perspective is needed while building the future. However, without examining past debates on education and the functions of schools, it will not be possible to give sound answers to the question of how schools of the future should be and what kind of qualifications those schools should give to individuals.

Answers to the questions of what the function of schools should be, what the purposes of and reasons for schools are, and what competencies individuals should possess have been discussed ever since educational activities were first institutionalized. As a result of the emergence of modern states, these debates have deepened even further. In fact, it is possible to observe this in statements of educational philosophies regarding education and the purpose and functions of schools, and even in the structures of programs. The function of educational institutions in past centuries has continued to be considered and discussed in conjunction with technological developments and the conditions created by the modern social structure.

PARADIGM CHANGES IN MODERN SOCIETY AND EDUCATION

If we were to list the important events experienced in the course of the transformation of education and schools as institutions, it would be possible to write volumes of books. However, we should particularly emphasize the concept of "information society" (Toffler, 1981) that emerged after the industrial revolution. The industrial revolution was an important breaking point that changed the structure of societies. After industrialization, the phenomena of urban life and mega-cities began to develop.

These changes caused the migration of rural populations to cities with the intent of having more opportunities in life, which led to the emergence of new cities, and thus to increased urban population, and, eventually, to the emergence of mega-cities. With migration and urbanization, people began demanding more education with the desire of attaining more opportunities and a higher standard of living (see Külhaçı, 1995). At the same time, the competitive job market needed more manpower to increase production, which increased the need for an educated workforce (Es and Ateş, 2004; Hochstadt, 1981; Huff and Angeles, 2011). Migration was accompanied by significant change in the social structure. Extended families turned into nuclear families (Janssens, 2002; Medick, 1976). Children had learned about life, culture, social behaviors, the environment, and daily life practices and gained experience in the setting of extended families, but they could not gain those same learning experiences in nuclear families. In the family structure that emerged after the industrial revolution, children were deprived of the opportunity to acquire a wide range of knowledge, skills, values, attitudes, and habits within their natural family environment. This situation also triggered disputes over the mission of schools. In addition, the modern society that emerged with industrialization and the subsequent information society created an environment that demands new qualifications from individuals, be they children, young adults, or adults.

It was formerly the joint responsibility of all family members to help children gain life skills within their extended families. After modernization, the necessity for schools to help children adopt the new forms of behavior that emerged with the changing social and cultural structure was brought to the agenda. The demands of the job market, the challenges of modern urban life, and the influence of political trends, which have all grown stronger in the last century, largely made the traditional role of the family obsolete, together with the





It was the joint responsibility of all family members to enable children to gain life skills within their extended families. After modernization, the necessity for schools to enable children to acquire new forms of behavior entered the agenda.



economic, social, and cultural impositions occurring with parental involvement in business life. Families are now just institutions composed of individuals who can come together only in the evenings and during limited holiday periods. Parents are no longer able to allocate sufficient time to their children or oversee their education. At the same time, the dizzying developments in information and internet technologies have increased the importance of the education of individuals, and of children in particular, in terms of socialization, communication skills, roles, duties, and responsibilities, while parents have largely been unable to keep up with these rapid changes. In the fight against ever-growing digital addiction (Bağcı, 2019; Li et al., 2021; Samli, 2019), it is quite difficult for parents to guide their children, who have been born in a different world (Shek, Zhu, and Dou, 2019; Shek, Zhu, and Ma, 2018).

THE MEASUREMENT OF SUCCESS

This new situation that has emerged as a result of both changes in family structure and developments in information technologies has given schools the mission of providing children with the range of knowledge, skills, values, attitudes, and habits that children formerly acquired in their families in more traditional settings. However, schools particularly focus on academic achievement, which includes only cognitive behaviors. This is the case due to schools' aim of enabling individuals to acquire a profession through education and to be well-equipped to maintain themselves financially. In fact, the success achieved in national and international exams is perceived as the criterion of the quality of education in many countries, and an analogy is drawn between the results of those exams and the quality of education. As a result, an education system based on success in exams is being imposed all over the world. However, the changing conditions of modern sociocultural and economic life cannot be managed by educational institutions that perceive academic success as the purpose of existence. How many educators or educational institutions can we list that can be proud of having contributed meaningful value for the good of the world and humanity? The COVID-19 pandemic, as the most recent major pandemic that humanity is facing, has shown us how much we need creative individuals to provide **"educational immunity."** Individuals who turn crises into opportunities provide great benefits not only to themselves but to humanity. However, perceiving and managing the changes discussed above is difficult for an educational system that aims at academic success focused on cognitive behaviors. If other institutions manage this process, then it could be asked why there is any need for educational institutions. With educational applications designed by a corporate culture that considers the educational process and success in education to be nothing more than test scores obtained from national or international exams, to what extent will it be possible to raise individuals who can shape the future and direct change? Expecting schools to manage change with an approach that considers education as simply statistical data is nothing more than a pipe dream.

WHAT DOES CHANGE STIPULATE?

The most important development observed in social life in the last 30-40 years has been the cultural environment that has started taking shape on the basis of digital technologies. This lifestyle supports individualism, leading individuals to loneliness. The dominance of the "first I," i.e. the "id" in Freud's conceptualization, lays aside the "sociality principle," one of the main educational principles. This situation also fuels the conflict between society and the individual. This is the case because while schools excite students about individualism, they ignore the idea that an individual's identity and personality develop and mature with social institutions and structures. This naturally erodes the purpose of education to "raise citizens." Japan is a country that can be shown as an example in this regard. Every Japanese citizen (*Nihonjin*) is first Japan (Nihon). In this



understanding, the individual must first feel a responsibility toward his or her country. The Japanese education system, shaped around the understanding that the purpose of existence for a Japanese person is Japan (Mori and Davies, 2015; Yonezawa, Kitamura, Yamamoto, and Tokunaga, 2018), is a model that can set an example for both considering the individual as a social being and raising individuals as good citizens. It seems impossible to raise individuals in such a way as to make them socially responsible and active members of society without changing the aforementioned function of schools, based on exam success. In addition, it is difficult for individuals to acquire social skills as well as cultural tolerance and the culture of living together based on cultural diversity. However, the consciousness of citizenship and the culture of living together are the most basic competencies that individuals should have in the world of the future.

One of the most important consequences of the COVID-19 pandemic has been the increasing importance of autonomous learning skills. Although autonomous learning competencies were already valued before the pandemic, the pandemic has served as a convincing experiment to demonstrate their full importance. Compared to other groups, self-motivated individuals are clearly observed to benefit more from education during such periods (Oosterhoff, Palmer, Wilson, and Shook, 2020; Smith et al., 2021). Studies reveal that learners with strong self-regulation skills show better performance in learning and self-control than learners with poor self-regulation skills (Wijaya, Ying, and Suan, 2020; Holzer et al., 2021). Such results are important in terms of showing how digital competencies should be perceived. These digital competencies include skills such as learning with digital media, self-directed learning, learning to learn, and managing digital data.

The economic, sociocultural, and political styles of the digitalizing world are increasing the importance of thinking skills with each passing day. This new era requires us to focus on raising individuals with critical, reflective, analytical, creative, and scientific thinking skills instead of focusing on teaching content. Instead of empirical problem-solving, we should focus on problem-solving skills that require creativity. Methodological and metacognitive thinking skills have become more important in coping with problems and producing creative solutions. Proactive, entrepreneurial individuals who have competencies such as digital literacy, take initiative, and make independent decisions need these skills.

> In the future, the main indicator of competence will not be simple documents, but rather the capacity of individuals to put their knowledge into practice. Rather than quantitative success, qualifications will be at the forefront. Evaluating the degree of success on the basis of numerical data may lead us to misconceptions.

Thinking about the future is also important in terms of career planning. For this reason, students should be provided with analytical and creative thinking skills. The competitive life of the business world offers countless opportunities to those who seek innovation. Completion of an undergraduate program is no longer considered adequate for a professional career anywhere in the world. Postgraduate education will also be considered as a requirement for ordinary careers in the coming years. An interdisciplinary perspective and the use of competencies in multiple fields are already widely accepted as necessary career approaches. A software engineer, for example, can only make a difference when he or she gains the competence to adapt artificial intelligence applications for the production of a ship,



aircraft, or automobile. This naturally requires both horizontal and vertical career planning.

In the future, the main indicator of competence will not be simple documents, but rather the capacity of individuals to put their knowledge into practice. Rather than quantitative success, qualifications will be at the forefront. Evaluating the degree of success on the basis of numerical data, as mentioned above, without considering all of these other issues, may lead us to misconceptions. For example, almost every student who has completed formal education anywhere in the world can speak a foreign language to at least some extent. However, the inability of individuals to actively communicate with other people by speaking that language in daily life will render their education meaningless in practice, even if they have a document (diploma, certificate, etc.) showing that they received language education.

As indicated above, methodological thinking is becoming an important competence. Neither a scientific approach to events and problems nor problem-solving based on trial and error or experience has gained more importance than the ability to make rational and creative decisions by handling issues with a systematic and scientific approach. Well-educated individuals are those who can make independent decisions with in-depth thinking based on data and the prediction of possible consequences, not by reaching solutions to problems by trial-and-error method.

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The Bridge Between the Job Market and Vocational and Technical Education: **Education Programs**

A vocational education strategy based on certification, which strengthens the bond between employment and education by providing students with skills for multiple professions, and which allows for flexible transitions between programs with its practice-oriented training programs, will carry our country into the future.

The ability of countries to achieve their development goals is associated with the availability of qu1alified manpower with competencies suitable for the necessities of the time. Vocational and technical education, serving the purpose of educating the required number of professional individuals equipped with the required competencies, is a dynamic education process that provides individuals with knowledge, skills, and behaviors related to a particular profession in business life. The European Training Foundation (2005) defines vocational and technical education as an educational process that provides an individual with knowledge and skills for a particular profession and enables him or her to acquire the knowledge necessary for the sustainability of the effectiveness of his or her job and to transfer his or her knowledge to other fields. Educational processes that enable individuals to transfer their knowledge to other fields, as mentioned in this definition, are solutions suggested for the problem of rapid obsolescence facing technical knowledge and skills as a result of the equally rapid changes in industry and technology.

The "Future Jobs" report published by the Turkish Council of Higher Education (2019) focuses on the fact that all professions in the world of the future will be subject to interdisciplinary educational processes; that when training programs provide specialization in a field, individuals need to be supported with interdisciplinary knowledge; and that all curricula should be integrated with courses that enable students to view the world, position their own professions accordingly, and make sense of success.

According to the ***National Employment Strategy*** (2014-2023), the low labor participation rate of young people, the difficulties they face during their transition from education to the job market, and the inadequacy of their basic skills are all still important issues.

On the other hand, in line with the targets of the ***2023 Vision Document released by the Ministry of National Education,*** studies are being continued to enable students to acquire multiple interdisciplinary skills and competencies in their professional fields and to access flexible training programs reinforced with different certification options, which can be adapted to new technologies.

VOCATIONAL EDUCATION IN TURKEY

In our country, vocational and technical education is given at the secondary level by vocational and technical Anatolian high schools, which implement various programs, as well as by multi-program Anatolian high schools and vocational training centers. Education and training activities are ongoing in 47 fields and 105 branches of vocational and technical middle schools, and in 34 fields and 183 branches of vocational training centers. In the 2020-2021 academic year, such education and training was carried out with 138,869 teachers and 1,511,876 students in 4,226 public vocational and technical secondary schools.

These schools where vocational and technical education is provided are implementing learning programs based on achievements, rooted in competence-based job and profession analyses. These programs are updated and new curricula are developed as needed, with the participation of our ministry and representatives of the relevant institutions and organizations, sectors, nongovernmental organizations, and universities, taking as reference the relevant education policies, feedback from educational institutions and practitioners, developing and changing technologies, requirements of the job market, national and international standards, national qualifications, ***the European Qualifications Framework, the Turkish Qualifications Framework, protocols, research and development reports, data from the Turkish Statistical Institute (TÜİK),*** and information from other institutions and organizations.

In this context, the framework education programs implemented in vocational and technical Anatolian high schools were updated in 2019 within the scope of the project entitled "Program Update at the Center of Basic Skills," which was carried out in cooperation with **UNICEF**. With this project, an educational program was designed based on professional skills facilitating adaptation from one employment area to another, which allows individuals to cope with the negative effects of this process, instead of professional skills that lose their value in the labor market in a short time due to changes in vocational and technical education, as well as the building of skills and competencies.

> The "Future Jobs" report published by the Turkish Council of Higher Education (2019) focuses on the fact that all professions in the world of the future will be subject to interdisciplinary educational processes, and that when training programs provide specialization in a field, individuals need to be supported with interdisciplinary knowledge, as well.

Increasing the employability level of students is among the primary objectives of this program update project. ***Accordingly, considering the current labor market data as well as future projections, 55 field and 203 branch programs were revised to 47 field and 105 branch programs in line with this update.*** With this revision, the branches above the 4th level reflecting secondary education according to the Turkish Qualifications Framework and the branches without employment were closed. Branches with more joint courses were combined with the intent of expanding the employment areas of the students. Fields and branches for which skills should be acquired first in the real-world business environment were included in the scope of vocational training centers. However, some branches were excluded from the branch structure and shifted into the certification system, which will be implemented for the first time within the scope of the programs of vocational and technical Anatolian high schools.



A CURRICULUM SUITABLE FOR SCIENCE AND TECHNOLOGY

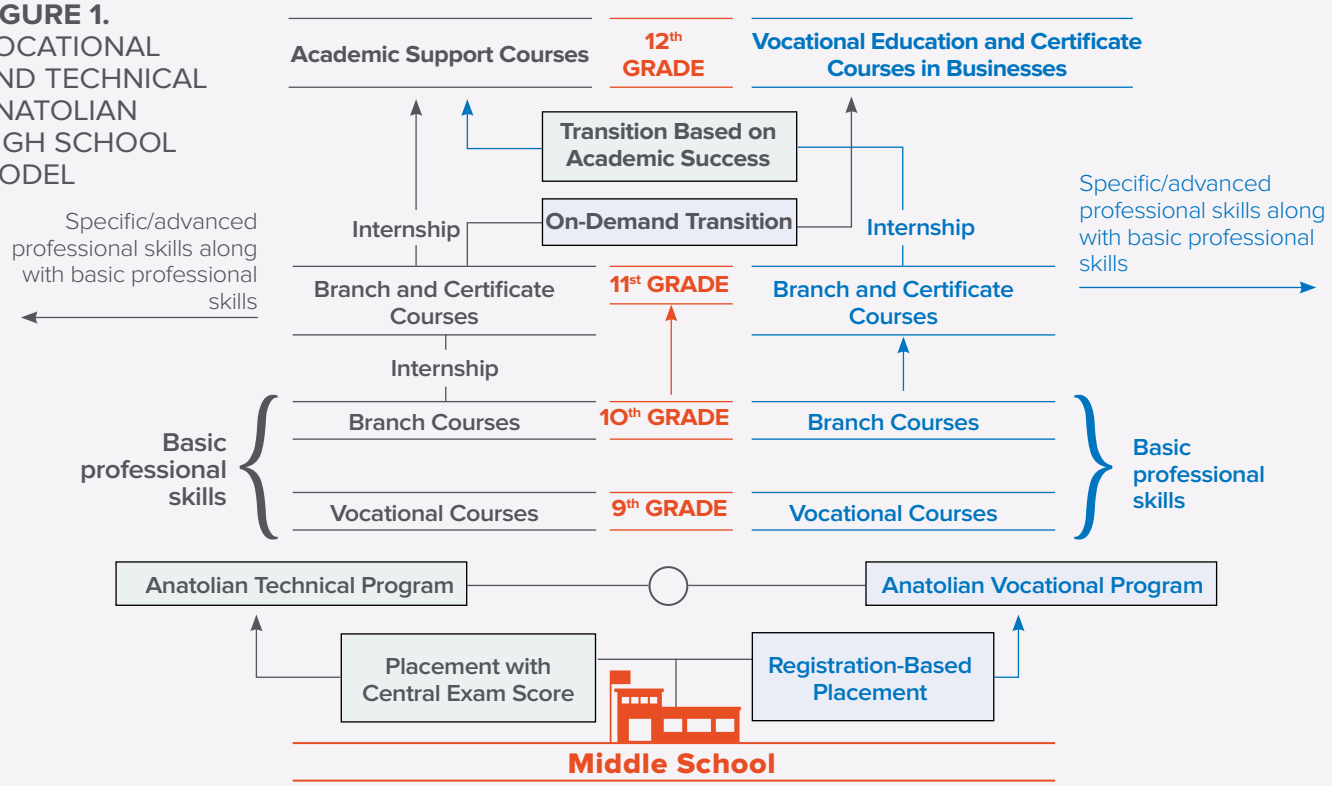
With this revision of fields and branches, the current courses and acquisitions from courses in vocational and technical education programs have been updated in accordance with the changes in science, industry, and technology. Dynamically structured certification was integrated into vocational and technical secondary education with the intent of preparing students for the business world of the future. In this context, besides the certificate programs for more traditional professions, there are also field-specific certificate programs related to future professions such as e-commerce and its logistics, cargo transport by unmanned aerial vehicles, and disaster logistics. It has been planned to provide selective vocational courses on digital skills to all students in the 11th and 12th grades who continue their education in the 47 fields and 105 branches of the certificate program, in order to enable them to adapt to the new world order and digitalized professions. This certificate is intended to provide students with skills such as programming (block-based programming, robotics, game programming), digital design (creating DIY web pages and animations), and the use of social media (e-commerce, digital marketing, data analysis, graphics).

The educational program of the professional development course, which is a common course given in all fields, has been updated in accordance with a skills-based program understanding and has been restructured under the name of ***"Professional Development Workshop"*** to ensure that students have key competencies. Within the scope of this course, it is aimed that students will be able to improve their 21st-century skills within the 3 main groups of basic literacy skills, social and emotional skills, and metacognitive skills, which include analytical and critical thinking, written and oral self-expression, interpersonal communication, effective/active listening, curiosity and motivation, collaborative work, leadership, self-management, hypothesis formation, and empathy.

Academic support courses are another important output of these program update studies. A strong academic support package is offered, including courses that provide basic academic skills in the 9th and 10th grades and those that will facilitate the transition to higher education in the 12th grade.

The update studies carried out for these purposes have been completed and entered into force with the weekly course schedules published in the Journal of Communiqués of the Ministry of National Education of Turkey with Issue No. 2751 and Decision No. 9 on 23/03/2020 by the Turkish Education Board. The structure of the updated version of the program is shown in Figure 1.

FIGURE 1. VOCATIONAL AND TECHNICAL ANATOLIAN HIGH SCHOOL MODEL







Our aim is to create a vocational and technical secondary education system focused on the development of both academic and professional skills of students, with strong ties to the business world.

As seen in Figure 1, placement within the entire Anatolian technical program (ATP), which is implemented in vocational and technical Anatolian high schools, is done based on the central exam taken at the end of the 8th grade, while placement in Anatolian vocational programs (AMP) is done based on either the central exam or secondary education registration without examination. Those who graduate from either type of program can continue their education in all higher education programs. However, the transition of ATP students to higher education is expected to be more intensive because of the higher academic weight in the curriculum. As seen in Figure 1, academic skills are given more emphasis in ATP as a result of the structure of the 12th grade in the new vocational and technical education model, while applied courses intended for vocational skills are given more emphasis in AMP. In the renewed weekly course schedules, the weekly courses are shown in a single chart for ATP and AMP. The plan has been designed in such a way that students take the same courses at the same time and same level in the 9th, 10th, and 11th grades. In both programs, professional field education is given in the 9th grade and branch education is given in the 10th and 11th grades, depending on the area of profession. In vocational and technical Anatolian high schools, differences arise in the 12th grade in accordance with the type of program.

In both program types, the common courses taken by students at this level are Turkish language and literature, religious culture and moral knowledge, foreign language, history of the Turkish revolution, and Kemalism. Students who study in the ATP are able to graduate upon taking academic support courses for 31 hours a week in addition to their common courses in the 12th grade. Within the scope of the AMP, on the other hand, students receive vocational education in businesses for 24 hours a week over 3 days and 7 hours of elective vocational courses and certificate courses in addition to their common courses in the 12th grade.

As a result, it is observed that this revision study is in accordance with the top policy documents, and with the 2023 Education Vision and 11th Development Plan in particular, and that it has brought about many structural changes in the education programs of vocational and technical Anatolian high schools that entered into force in 2014. These changes support the creation of a vocational and technical secondary education system focused on the development of both general academic and specific professional skills of students, with strong ties to the business world and sensitivity to individual and regional needs. Again with this update project, an educational structure is targeted that will strengthen the link between employment and education by providing students with skills for multiple professions, allowing for flexible transitions between programs thanks to certification-based, practice-oriented training programs and intended to strengthen academic competencies, especially for students who aim at receiving higher education.

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The Metamorphosis of Humanity and an Appropriate Approach to Changing Paradigms: **The STEM Education Approach**

Don't we need a design- and skill-oriented pragmatic approach to education in an environment where both people and media change so quickly? We should think seriously about how education will adapt to these changes.



In recent years, we have entered a transformation process of change that is being shaped by the media in particular. We are at a time when the media has great influence on the sociology of society. It can be said that humanity today is undergoing a process of metamorphosis. Human beings started making machines as a consequence of the industrial revolution and then began to establish risky relationship with tools. Internet technologies were launched in an era when the sense of sight was prioritized. It was accordingly very easy to see and access information through the media. The number of social media tools increased rapidly as ever-developing internet technologies encouraged and featured social media usage and user participation. At this point, merely seeing no longer satisfied people, who wanted to share and show what they saw. This rapid process of change led to great differences between generations. Children shared their "statuses," played online games, and became YouTubers. This significant change left parents in a difficult situation. Parents couldn't stop that process of development and change. Locking a child in a room together with access to the internet and other media became the greatest possible reward that could be given to a child. As the child could experience the world with all its ugliness through the media in his or her own room, the issue of where and how limits could be set became a big problem. Moreover, many parents weren't even aware of this danger. While private aspects of their lives were being disclosed through different social media tools by their children, the parents talked among themselves about the memories of their nice, simple childhoods.



Unfortunately, technology doesn't slow down for individuals who expect change and transformation to be slow. Technologies are gaining even more momentum through big data, artificial intelligence, cloud systems, and developments in robot operating systems, to name a few. Moreover, technology is not only changing sociology; it is also taking steps at breakneck speed to completely change human biology. Developments in biotechnology are now focusing on guiding moves intended to transform humans into super-humans. All kinds of location-based health data of a person can be accessed through technologies such as smart watches.

Humans have lost time due to media, and now they have completely surrendered themselves through their relationships with this platform. In the process of progressing towards super-humans, the question of whether man will remain human at all has become debatable because of this situation. The question of whether humans will continue to use tools or tools will start using humans has also turned into an important problem.

As a result of such major change and transformation, we face the problem of not knowing how the changes in people's lives and emotions will reflect on education, an important part of human life. We are progressing in the opposite direction of Seneca's words: "We learn for life, not for school." Unfortunately, our students learn for school, not for life. For example, today investments are being made in hybrid and electric cars in Turkey. We observe that the market is turning toward more environmentally friendly fuels. Therefore, the question of "are we currently producing specialist staff for hybrid and electric cars and/or engineers?" should be an important agenda item for us.

Humans have lost time due to media, and now they have completely surrendered themselves through their relationships with this platform. In the process of progressing towards super-humans, the question of whether man will remain human at all has become debatable because of this situation.

Among the factors that make human metamorphosis necessary, important changes in life paradigms and media are particularly effective. This metamorphosis can also be explained conceptually. For example, many of us have ideas about Industry 4.0, Society 5.0, lights-out manufacturing, and the transition from robots to cobots, or cooperatively working robots. Well, don't we need a design- and skill-oriented, pragmatic approach to education in an environment where both people and media change so quickly? We should think seriously about how education will adapt to these changes.

I'd like to talk about an education approach that has recently been widely used in our country because of this awareness: the STEM education approach. In fact, this is a curriculum development approach that emerged thanks to the advantages of the flexible and decentralized structure in the United States. Although some people argue that the STEM education approach emerged in the early 1900s, it actually started as a consequence of the Russian launch of the Sputnik satellite (October 4, 1957) and America's reaction to that development, after which science education was considered more important and was funded more heavily in America. Conspiracy theories were on the agenda of the American media at that time, from the scenario that the Russians were spying on the Americans to the scenario that they would attack the



USA from space. I recommend you watch the movie October Sky (1999), which is about those times, to understand this psychology. This event caused the USA to give importance to science education and make science-oriented materialistic development the most basic starting point. The 1990s saw a decrease in interest in engineering and science education in the USA, and then STEM education was the focus of more funded projects after the 2000s in particular.

SO, WHAT IS STEM?

STEM is actually an acronym and its first letter refers to the word "science." That is followed in English by the initials for technology, engineering, and mathematics. The Turkish equivalent is FeTeMM (fen, teknoloji, mühendislik, matematik). Many published studies can be found by searching the internet for STEM, FeTeMM, or other alternative names. In Turkey, this is mostly used as an education approach, referred to as the STEM education approach. There are many definitions of the STEM education approach in the literature; however, it can be said that the following definition is the most appropriate one for correct application in our country1:



STEM Education Approach

It is an education approach that is not only product-oriented, but also process- and skill-oriented, which integrates the disciplines of science, technology, engineering, and mathematics for the solution of real-life problems, and which makes it easier to understand real-life problems through interesting and motivating experiences.

"It is an education approach that is not only product-oriented, but also process- and skill-oriented, which integrates the disciplines of science, technology, engineering, and mathematics for the solution of real-life problems, and which makes it easier to understand real-life problems through interesting and motivating experiences."

"So, does the STEM education approach offer a complete solution to the changes and transformations that we are experiencing?" and "How much does our country really need this approach?" are questions that we need to think about. As many educators have experienced, STEM is, in fact, a foreign-sourced solution not entirely compatible with our values and goals. It is obvious that trying to adopt and directly implement approaches like this leads us to say "the mountain gave birth to a mouse," or that the outcome is much smaller than expected. The "FATİH Project" is the best example that can be given for this situation. It was a project carried out for the adaptation of technology to education. However, its impact on students' success was not at the expected level, despite considerable investments made within the scope of the project. It would be appropriate to say that within the scope of the STEM education approach, interest in the more prestigious engineering faculties in our country has not decreased; in other words, there is no decrease in students' preferences for professions with high social status such as engineering. In this context, for educating competent engineers, the STEM education approach can be used to support students who prefer these fields by increasing their level of readiness and helping them to gain the right to receive education in the relevant university faculties.



Another positive effect of the STEM education approach can be seen among students who don't want to be crushed under piles of information, who reject memorized information, and who have undergone a metamorphosis. Such students prefer ways of accessing information to solve problems because power is no longer information alone; it is also the ability to reach the correct information for the solution of a problem quickly, and to access valid and reliable information. Nowadays, when it is easy to access information, it is possible to talk about information inflation and information pollution. In this context, the STEM education approach can be defined as a pragmatic approach. It will be helpful here to detail the pragmatism of the approach. It is sufficient for individuals to have or acquire enough knowledge to solve the problems that are given to them. Sufficient knowledge and skills to solve problems are acquired, and then they are used and included in cognitive processes. Since the acquired knowledge and skills are used in these processes, they can turn into permanent knowledge or skills for these individuals. Individuals learn only as much as they need, but it is true learning, because the learning and skills in question are adequate for the solution of the problems given to them.

We are not at the level we would like to be at in terms of the skills highlighted by the STEM education approach, such as collaborative group work. I hope better efforts will be made in the future to integrate the STEM education approach and similar innovative approaches into our curriculum.

Unfortunately, in our existing education programs, we can't fully reflect the philosophy and features of the STEM education approach as well as the engineering design process that is its theoretical framework2. We are not at the level we would like to be at in terms of the skills highlighted by the STEM education approach, such as collaborative group work3. I hope better efforts will be made in the future to integrate the STEM education approach and similar innovative approaches into our curriculum.

I foresee no problems in accessing information in the future. However, I believe that having knowledge of how to quickly reach the right information to solve problems and using it by design to solve those problems will still be considered an important skill. The STEM education approach will be an important opportunity for properly evaluating and implementing this competence and enabling everyone who has a role in the education process to acquire it.



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Teacher Competencies in the Digital Age

Training leading teachers with the competence to effectively develop and use existing digital content by supporting their professional development is of great importance in terms of the digital transformation being experienced as a result of technological developments. This is the only way for us to prepare today's children for the future.



In the present age, often called the "digital age," developments in technology are progressing at a speed that is difficult to follow. Adapting to technological developments has become inevitable for individuals working in different fields, from healthcare to engineering. Studies conducted in the field of education before the global pandemic emphasized that teachers showed resistance to technology integration (Lim & Khine, 2006). However, with the distance education practices carried out due to the pandemic, it has become compulsory for teachers who showed resistance to technology integration to adapt to this process now, as in other professions. Teachers' resistance to technology integration, as well as their relevant attitudes, knowledge, and skills – or in other words, the factors dependent on teachers - are defined as internal factors that pose an obstacle to technology integration. Factors that are not dependent on teachers, such as access to information and communication technologies, inadequacy of time, and inadequacy of technical support, are classified as external factors that affect technology integration (Ertmer, 1999). For many years in Turkey, importance has been attached to efforts to remove the external factors that pose an obstacle to technology integration. In this context, protocols have been signed with international organizations and companies such as the World Bank, the European Investment Bank, Intel, and Microsoft, and work was undertaken with the intent of establishing an infrastructure for information and communication technologies in schools and disseminating internet access within the scope of the activities of the **Basic Education Project-Phase I in 1998** and **Basic Education Project-Phase II in the period between 2002 and 2007** (Çoban, Saray, and Ulutan, 2017). The project entitled **Movement of Enhancing Opportunities and Improving Technology (FATİH)**, which began implementation in 2010, was intended to provide a technology infrastructure in all schools and to enable all students to benefit equally from technological opportunities (Okur, 2018). Finally, in order to achieve the objectives specified within the theme of **"Digital Content in Learning Processes and Skill-Assisted Transformation"** in Turkey's 2023 Educational Vision, the *Directorate General for Innovation and Education Technologies* affiliated with the Ministry of National Education is carrying out its own studies, and technological infrastructural studies in schools are continuing at a rapid pace (Milli Eğitim Bakanlığı Yenilik ve Eğitim Teknolojileri Genel Müdürlüğü, 2020). With these projects, efforts are being made to eliminate the external factors that pose obstacles to technology integration in education and training processes. However, these studies are not limited to creating a technological infrastructure; they also aim at eliminating the internal factors that affect technology integration through hands-on training given in the dimension of "teacher training."



The number of studies on the use of devices or applications such as artificial intelligence, mixed-reality technologies, and 3D printers in the field of education is increasing rapidly, but in technology integration, it is important to remember that technology is just a tool.

TECHNOLOGICAL PEDAGOGICAL AND CONTENT KNOWLEDGE (TPACK)

Ensuring that teachers have the necessary competencies to achieve effective technology integration is undoubtedly one of the most important factors in providing digital transformation in education (Kolburan Geçer and Bakar-Çörez, 2020). The number of *studies on the use of devices or applications such as artificial intelligence, mixed-reality technologies, and 3D printers* in the field of education is increasing rapidly, but in technology integration, it is important to remember that technology is just a tool. In other words, it is important to ensure that when teachers plan the teaching process, they consider which technologies can be used and plan lessons while considering the desired achievements in line with the curriculum, the general characteristics of the students (age, gender, socioeconomic status, giftedness, learning difficulties), their pre-qualifications (knowledge about the subject, possible misconceptions, concepts that they may find difficult to understand), and their learning styles, instead of focusing on the technology. Teachers' pedagogical and content knowledge is thus considered to be the basis of any effective teaching that will be achieved with technology.

Technological Pedagogical and Content Knowledge (TPACK) is a teacher's knowledge about:

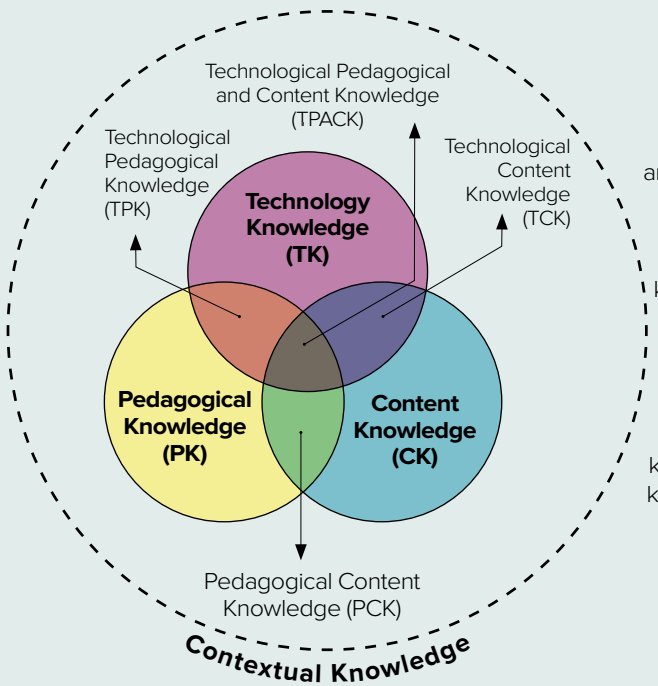
- the use of technologies in a constructive way to show concepts and teach the subject;
- the factors that make concepts difficult or easy to learn;
- the use of technology in solving some of the problems that students face;
- the determination of students' knowledge; and
- how technology can be used to build new knowledge on top of existing knowledge or strengthen old knowledge (Mishra and Koehler, 2006, p. 1029).



Within the theoretical framework of TPACK, technological content knowledge (TCK), which results from the interaction of technological knowledge with content knowledge, is knowledge on how to decide on technologies suitable for the subject area, while technological pedagogical knowledge (TPK), which results from the interaction of technological knowledge with pedagogical knowledge, is knowledge on using technology considering pedagogical methods. For example, in teaching the subject of refraction and lenses, a science teacher's having knowledge on technologies such as animation and simulation, whereby students can observe the refraction of light using convex and concave lenses, can be an indicator of the teacher having TCK. A teacher with TPK, on the other hand, is expected to take into account pedagogical factors such as teacher-student, student-student, and student-material interactions while managing the classroom and selecting appropriate strategies, methods, and techniques when using simulations or animations.

Contextual information emphasized in the TPACK model includes information about the school, region, and society, such as the school where the teacher works, the location of the school, factors affecting learning at the school, the technological infrastructure of the school, and students' access to technology (Grossman, 1988; Mishra, 2019). Especially during the current pandemic, the need to plan this process by taking into account the technological infrastructure for both students and teachers as well as their access to technology has brought contextual information to the fore in technology integration processes. Teachers who felt that their technological pedagogical and content knowledge was sufficient adapted more easily to the emergency distance education that was quickly adopted during the pandemic (Ladendorf, Muehsler, Xi, and Hinderliter, 2021). Similarly, now that vaccination rates are increasing rapidly, it is important for teachers to have strong technological pedagogical and content knowledge regarding the pedagogical methods that can be applied after the pandemic (Educators Technology, 2021).

FİGURE 1: **TPACK AND THE TYPES OF INTERACTING KNOWLEDGE** (Mishra, 2019, P. 77)



As shown in the Venn diagram in Figure 1, TPACK is located in a common intersection area where pedagogical knowledge (PK), content knowledge (CK), and technological knowledge (TK) interact with each other. TPACK is not only the knowledge that arises from the combination of these three types of knowledge, but also the knowledge that enables a teacher to effectively blend appropriate pedagogical methods and technologies by taking the subject area into account.



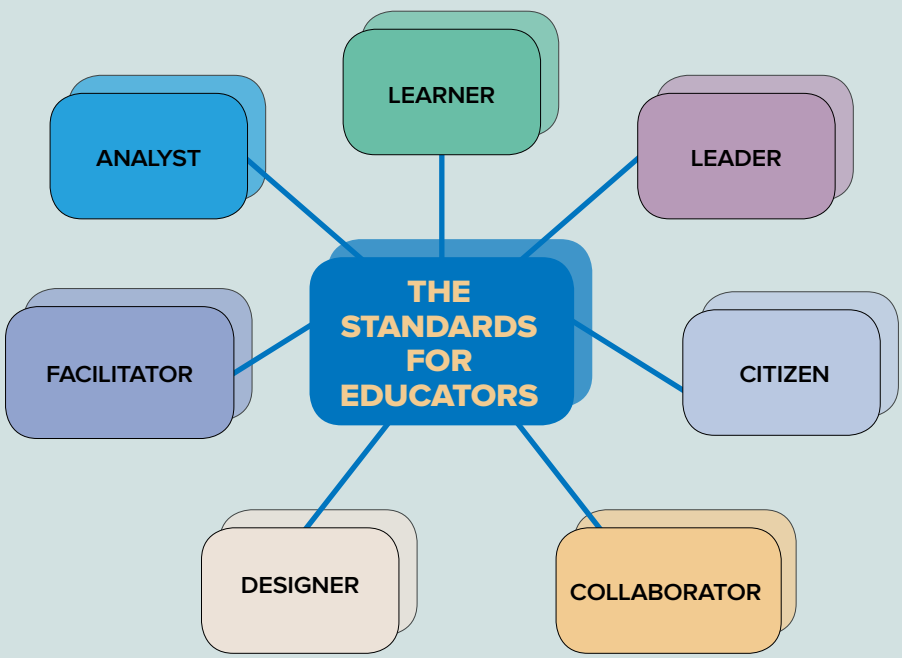
TEACHER COMPETENCIES

In Turkey, teachers are expected to use information and communication technologies effectively in their teaching and learning processes within the scope of the current "*General Competencies for the Teaching Profession*" issued by the *Directorate General for Teacher Training and Improvement (ÖYEGM)* (Öğretmen Yetiştirme ve Geliştirme Genel Müdürlüğü, 2017). Accordingly, ÖYEGM carries out in-service training activities to improve the technological pedagogical and content knowledge of teachers working in various branches (ÖYEGM, 2021). These efforts are surely making significant contributions to the modernization of teacher education and improving the quality at the national level.

At the international level, on the other hand, the ***International Society for Technology in Education (ISTE)*** sets standards for educators, students, education administrators, technology coaches, and computer science educators with the intent of creating innovative teaching environments in the digital age and making the use of technology in teaching more fruitful. These standards are updated in accordance with the changing roles of teachers and students in the digital age (International Society for Technology in Education, 2016).

The ISTE has set the "**learner, leader, citizen, collaborator, designer, facilitator, and analyst**" standards, and within the scope of those standards, it has defined the skills and pedagogical understandings of the digital age that educators may need in learning and teaching processes. In line with these standards, educators are expected to continually improve their practice by learning from and with others to improve students' learning (*learner*); to be a leader in improving teaching and learning and supporting students' success (*leader*); to inspire students to positively contribute to the digital world and take responsibly there (*citizen*); to collaborate

FİGURE 2: **THE STANDARDS FOR EDUCATORS** (ISTE, 2016)





Contextual information emphasized in the TPACK model includes information about the school, region, and society, such as the school where the teacher works, the location of the school, factors affecting learning at the school, the technological infrastructure of the school, and students' access to technology.

with both colleagues and students to improve their practice, discover and share resources and ideas, and solve problems (*collaborator*); to design authentic, learner-driven activities and environments (*designer*); to facilitate learning with technology (*facilitator*); and to understand and use data to plan their instruction and support students in achieving their learning goals (*analyst*) (ISTE, 2016).

It would not be appropriate to perceive the definition of "collaborate with colleagues," used in specifying the ISTE standards for educators, as merely the cooperation of teachers with other teachers from their own branches. In our age, teachers' use of interdisciplinary approaches and their ability to carry out studies in an interdisciplinary and transdisciplinary manner together with colleagues from different disciplines to achieve the integration of disciplines are of great importance in terms of the ability to produce students with ***critical thinking, communication, collaboration, and creativity skills***, which are collectively called the 4 Cs of the 21st century. As aimed in Turkey's 2023 Education Vision (Milli Eğitim Bakanlığı, 2018), supporting the professional improvement of teachers and training leading teachers equipped with competencies for using and developing existing digital content effectively have become indispensable due to the digital transformation being experienced as a result of technological developments. Considering both the internal and external factors affecting technology integration as highlighted at the beginning of this article, barriers to technology integration would lead to a situation reminiscent of the words of the famous educator John Dewey: "If we teach today as we taught yesterday, we rob our children of tomorrow."

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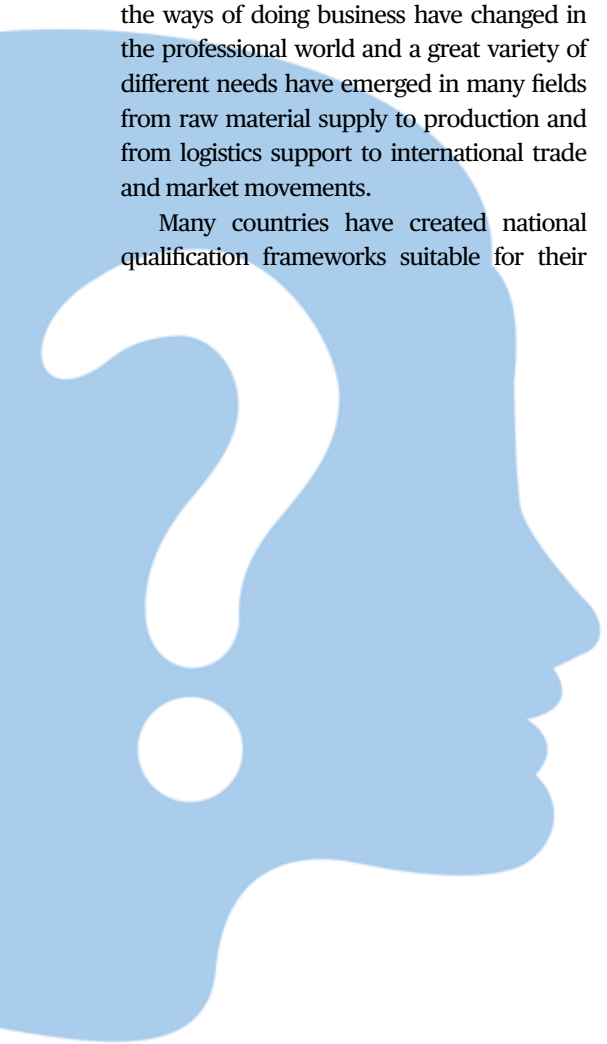
New Vocational Trends and the Turn in Higher Education

As access to information has become easier today, employees who can process big data and turn that into information and who know how to use information are needed more than employees who have raw information.



When we look at the relationship between humanity and industry, we see that the first industrial revolution resulted from the shift from the reliance on human power to mechanization in production, which took place between the second half of the 18th century and the early 19th century after the invention of the steam engine, which was an important milestone. This was followed by the second industrial revolution, which resulted from the widespread use of electricity. After that period, computers and digitalization created an unprecedented momentum in industrial production and in all other layers of life. As a result of the rapid transformation experienced after the third industrial revolution, characterized by this wave of digitalization, the ways of doing business have changed in the professional world and a great variety of different needs have emerged in many fields from raw material supply to production and from logistics support to international trade and market movements.

Many countries have created national qualification frameworks suitable for their own conditions and have begun carrying out studies to compare and match systems with each other by first defining and classifying them in order to standardize their own competencies and, more importantly, to enable cross-border mobility in the next step. The European Parliament and the European Council published their recommendation on the **European Qualifications Framework for Lifelong Learning (EQF-LLL)** in 2008. Along with European Union member countries and other countries in the membership process, Turkey developed its own national qualifications framework (*Türkiye Yeterlilikler Çerçevesi* [Turkish Qualifications Framework]: TYÇ) and published it in 2015. In 2017, the TYÇ was referenced with the EQF-LLL.



THE IMPACT OF DIGITALIZATION AND AUTOMATION ON PROFESSIONS

In the period that followed, countries determined job descriptions and qualifications one by one, and they completed leveling processes for the education given within the scope of their education systems, which has also included higher education. Thus, countries have aimed at minimizing international equivalency and recognition problems. Alongside such studies, the concept of Industry 4.0, also known as the fourth industrial revolution, has been used frequently since 2008 as a result of the digitalization and automation processes that gained speed after the third industrial revolution.

> In this new era, rather than individuals who specialize in a single profession and do the same job until retirement, individuals who can adapt to changing circumstances in professional life with the principle of lifelong learning will come to the fore.

In this period called Industry 4.0, as information and communication technologies are developing rapidly, autonomous systems are also becoming increasingly widespread with the addition of automation and artificial intelligence in repetitive jobs. Compared to systems relying on human power, autonomous systems have provided significant increases in productivity in production. Various machines, platforms, production lines, stocks, and supply chains operated through networks created by a great variety of software are leading us into a whole new world in conjunction with different components working in harmony with each other by communication via the internet of things.

Due to this process, predictions of increased unemployment or the complete disappearance of some professions are being expressed more frequently with each passing day. However, human beings have always adapted quickly to changing conditions and know how to turn threats into opportunities, or at least how to make themselves necessary in some way. A study conducted by the McKinsey Global Institute revealed that the highest increase in productivity provided by Industry 4.0 has been achieved on platforms where humans work in harmony with machinery. Based on such findings, a gradual decrease in the need for some lines of business or professions is considered to be inevitable. However, in the scenario that is being developed in accordance with these new conditions, new professions are also expected to emerge based on the need for different competencies.

Definitions of "competence" in the new era: Since access to information has become easier today, employees who can process big data and turn that into information and who know how to use information

are needed more than employees who have raw information. Professions that involve static and repetitive actions and which are therefore most suitable for automation are among the professions on the verge of disappearance. Individuals who do these types of works will need to have strengths such as adaptability and flexibility that allow for adaptation to constantly changing conditions, together with strong social communication skills and creativity. More importantly, the business world increasingly needs individuals who are equipped with the required qualifications to meet the expectations of Industry 4.0. Employees should constantly invest in their personal development in order to be able to adapt to the changing requirements and emerging new situations in their careers. Rather than individuals who specialize in a single profession and do the same job until retirement, individuals who can adapt to changing circumstances in professional life with the principle of lifelong learning will come to the fore.

According to a Russian proverb, "Luck is the street corner where preparation meets opportunity." The key competencies to be acquired in different fields that will prepare individuals for the new era are the subject of many studies and reports on the business conditions of the future. The World Economic Forum's **Future of Jobs Report 2020** lists the top 10 skills expected to be prevalent by 2025 as follows:

- Analytical thinking and creativity
- Active learning and learning strategies
- Complex problem-solving
- Critical thinking and analysis
- Creativity, originality, and initiative
- Leadership and social influence
- Technology use, monitoring, and control
- Technology design and programming
- Resilience, stress tolerance, and flexibility
- Reasoning, problem-solving, and ideation



As habits in both daily and business life change completely, radical changes are also occurring in higher education, which prepares young people for the professions of the future.

Some examples of professions that will gradually lose their importance in the future and some professions that will emerge or gradually gain more importance in the future are shown in Table 1.

ACHIEVING CONTEMPORARY COMPETENCIES IN HIGHER EDUCATION

As emphasized above, the business world and industrial processes are already experiencing a very rapid period of change. At the same time, they are also being seriously challenged during the COVID-19 pandemic. As habits in both daily and business life change completely, radical changes are also occurring in higher education, which prepares young people for the professions of the future.

In this process, the world of higher education has been forced to shed its skin and abandon its strict rules for good. Under compulsory closures and isolation measures, education quickly migrated to digital platforms. While trying to adapt to these unprecedented conditions that are being referred to as the "new normal," higher education institutions have faced the challenges of achieving learning outcomes including the knowledge, skills,

TABLE 1.

Professions That Will Lose their Importance in the Future	Professions That Will Gain Importance in the Future	
Assembly and factory workers	Big data analysts	Innovation professionals
Data entry clerks	Internet, digital communications, and data security specialists	Autonomous robotic systems specialists and engineers
Secretaries	Artificial intelligence and machine learning specialists	Space technology specialists
Bank and post office workers	Digital automation and transformation specialists	Cyber defense and strategy specialists
Cashiers	Specialists related to developing new technologies	Humanities and social sciences specialists
Accountants and financial analysts	Social media management specialists	Service and solution specialists for new technologies
Drivers in the transport industry	Human–machine–digital platform interaction specialists	E-commerce strategists
Internet, telephone, and door-to-door marketing staff	Information technology specialists	Natural resource management and environmental risk management specialists
Customer service representatives	Technology education specialists	

At the 2018 World Economic Forum, business leaders stated that **42%** of the core competencies considered necessary then were expected to change by 2022.

competencies, and values that they promised to give students. However, the readiness levels of different national higher education systems and institutions in the face of such a crisis have been seen to differ significantly in terms of technological infrastructures and individual competencies. Although some higher education institutions were experienced in this regard, there were inequalities in terms of students' access to technology. Even in cases where both institutions and students, as the two parties of these new educational dynamics, were prepared and experienced, there were serious limitations in the online provision of applied training intended to equip students with practical skills. Another important challenge of distance education has been that conventional assessment practices cannot be done securely enough in the online environment, causing great anxiety among students. Another important issue has been the lack of ideal effective, efficient, economical, secure, and user-friendly platforms through which higher education institutions and students can engage in lectures, share materials, and carry out measurements and evaluations interactively, providing accessibility with similar effectiveness across quite different technological infrastructures and meeting many different field-specific needs and expectations.

After the beginning of this compulsory education process, which was initially addressed in the spirit of crisis management, higher education institutions tried to establish a system that could also be called "combined education," containing more systematic, sustainable, and improvable regular applications more suitable for student expectations. Of course, this compulsory shift was experienced in a period when output-oriented approaches, quality processes, and sustainability were sought in higher education for flexible learning within ever-changing educational styles and environments, while it also seemed to pose a threat to quality assurance and sustainability in higher education. In fact, this transformation, which could meet the current needs of all stakeholders, is fully aligned with the logic of quality assurance, the basic element of which is continuous im-



provement.

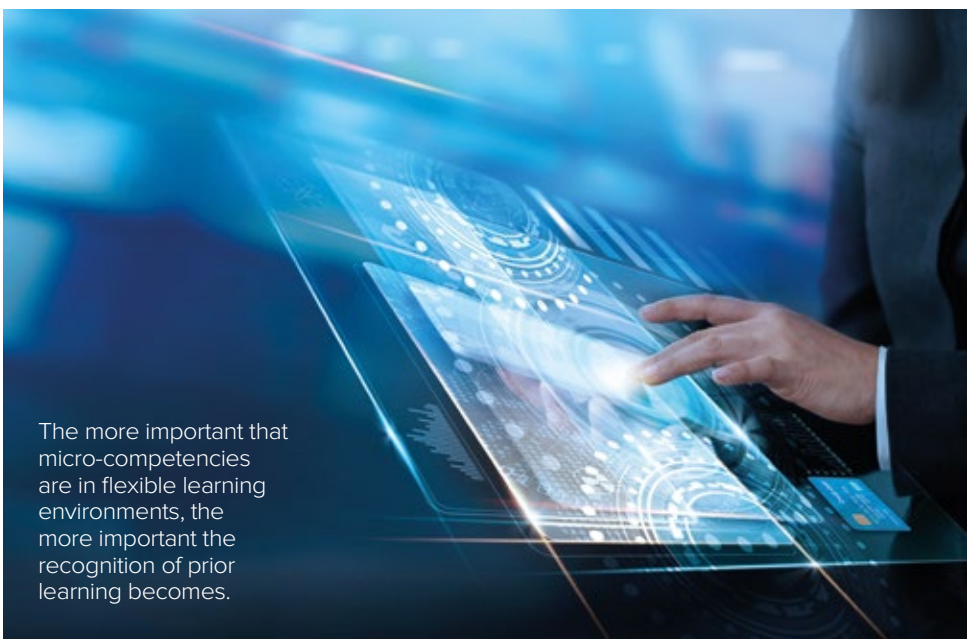
THE IMPACT OF COVID-19 ON THE INTERNATIONALIZATION OF EDUCATION

After the COVID-19 pandemic in particular, internationalization has gained great importance in higher education, which has migrated beyond the walls of classrooms and campuses. The mobility of students has led to an increase in the need for global recognition of the education received in different countries. This prompted national higher education quality agencies, and especially the **European Higher Education Area (EHEA)**, to review the quality assurance processes being carried out in their own higher education systems. It is expected that when physical mobility picks up again, a more efficient, effective, and sustainable higher education quality assurance system will be established with wide acceptance among different countries using the advantages of both digital and physical education environments with the experience gained from this difficult period. In addition to distance education, which has migrated to digital environments, the foundations of this new system will include important expansions in areas such as flexible learning, micro-competencies (education modules with limited scope intended for meeting social, cultural, and personal needs or the needs of the business world, with certain outputs, providing learners with certain knowledge, skills, and competencies), digital certificates, and recognition of prior learning.

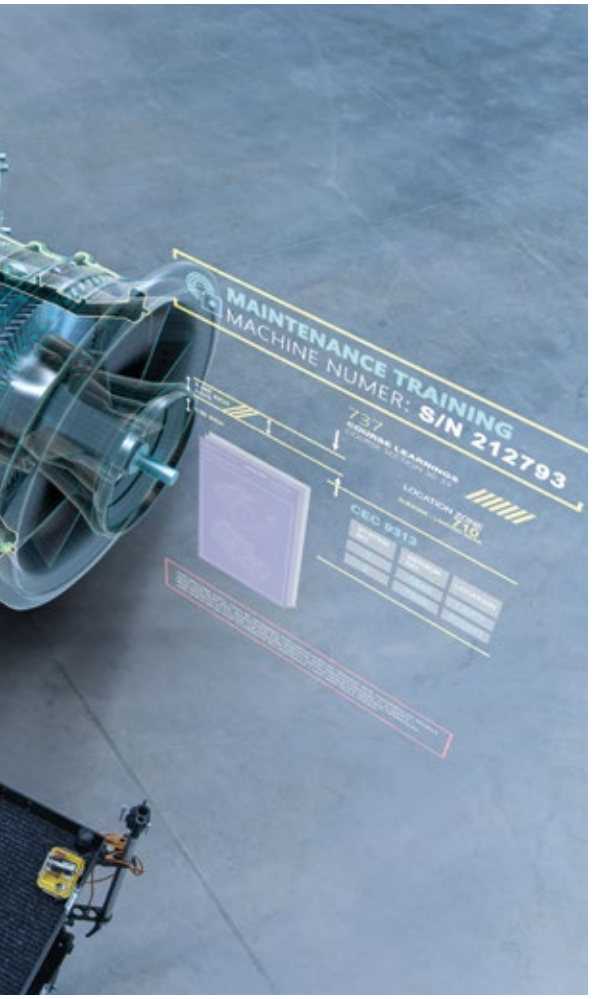
THE IMPORTANCE OF MICRO-COMPETENCIES

Micro-competencies are important because they are considered to be tools that can create disruptive transformations in the traditional model of learning, which has been defined by the World Economic Forum as "outdated and far from meeting the business world's expectations regarding the future." Learners no longer pursue traditional diploma programs.





The more important that micro-competencies are in flexible learning environments, the more important the recognition of prior learning becomes.



Instead, they turn towards opportunities that will help them develop their existing competencies or gain new ones, quickly adapting themselves to the professional and technical changes that occur in business life. At the 2018 World Economic Forum, business leaders were asked about the basic competencies expected to maintain their importance between 2018 and 2022, and they stated that 42% of the basic competencies considered necessary to do most jobs of that day would have changed by 2022.

A study conducted by the American Bureau of Labor in 2019 revealed that the average employee changes jobs 12 times during his or her career. Although uncredentialed jobs are prevalent, it is frequently observed that individuals change their fields of specialization with new learning throughout their careers, particularly because of the recent changes. When viewed from this perspective, the more important that micro-competencies are in flexible learning environments, the more important the recognition of prior learning becomes. Micro-competencies and prior learning may correspond to preparatory, associate, undergraduate, or postgraduate levels in higher education systems in different countries. Micro-competencies can also be certified with digital passports or certificates completely independent of traditional higher education programs.

> Learners no longer pursue traditional diploma programs. Instead, they turn towards opportunities that will help them develop their existing competencies or gain new ones, quickly adapting themselves to the professional and technical changes that occur in business life.

The most important task facing us with this rapidly changing structure of higher education systems is to ensure quality processes that will guarantee mobility, recognition, and accreditation of these types of education. Prior learning is expected to receive the place it deserves in an individual's CV by being recognized in some way with micro-competencies, which are flexible parts of learning that will enable the training of graduates with competencies to meet the needs of the business world. This will be achieved by establishing a common definition of prior learning and providing it with quality assurance through the joint work of national quality agencies that are members of umbrella organizations such as the **European Association for Quality Assurance in Higher Education (ENQA)**.

In the end, the achievement of these goals is only possible if higher education institutions adopt a highly competitive structure that prioritizes internationalization and supports all kinds of mobility, whereby they can provide quality assurance of output and competence-oriented education, training, and research processes with a rapid and planned transformation together with the establishment of integrated campus information management systems while benefiting from robotic process automation systems that will provide increased internal and external stakeholder satisfaction and performance enhancement in repetitive academic and administrative processes.

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Changing Qualifications and Training in the Context of Digitalization

Since the differentiation of methods and tools used to access information and the changing speed of access to information have an impact on the teaching process, the curriculum and the methods and tools used as well as the learning environment should be restructured considering the changing needs of students.





Today, developments leading to changes on a global scale are being experienced and new opportunities are being acquired in the field of technology. It is stated that these opportunities and changes have led to a great digital transformation in many fields such as health, education, and industry with the consideration of social needs (Karabacak & Sezgin, 2019). This digital transformation being experienced in today's information age (Bozkurt et al., 2021), where absolute power depends on the information possessed by individuals, is affecting the qualifications and degrees needed in the field of education, as in all other fields; as a result, the expectations in the world and in societies are becoming different.

In the IMD World Digital Competitiveness Ranking Report (IMD World Competitiveness Center, 2020; Figure 1), which ranks countries according to their digital competitiveness, the three main factors of **knowledge, technology, and future readiness** are taken as the basis for country rankings and show the importance of the digital transformation being experienced. For Turkey, shown among the countries that have achieved the greatest

> In the Education 4.0 concept, where educational designs linked to real-life scenarios are emphasized, skills such as digital literacy, problem-solving, and critical thinking are coming to the fore in educational environments.

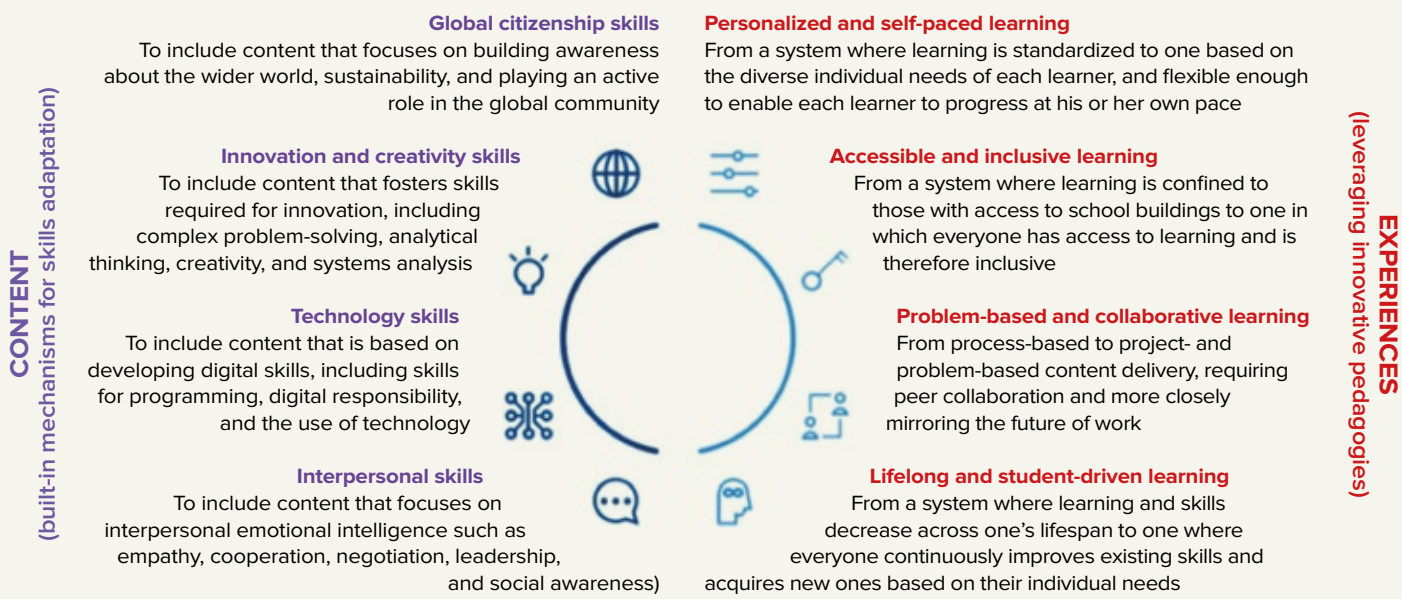


improvements compared to 2019, this report confirms that the developments regarding "future readiness" are positive, but improvement on some issues related to the "knowledge" and "technology" factors are needed.

EDUCATION 4.0 AND ITS REFLECTIONS

The reflections of the digital transformation being experienced in education are directly related to the development of industry. Education 4.0 is defined as the current period of education under the impact of Industry 4.0, whereby smart and sustainable infrastructures and developing technologies are being used to improve information production and transfer processes and the four main components of competencies, learning methods, information and communication technologies, and infrastructure are present (Hussin, 2018). With the advances in technology and the development of industry, education shifted from Education 1.0, where the teacher was at the center and he or she was responsible for identifying and disseminating the basic information needed, to Education 2.0., where the role of the teacher began evolving towards being one among various references. Education then shifted to Education 3.0, where teachers began working as collaborators and where computer and multimedia tools were more supportively included in educational environments, and then finally shifted to Education 4.0, where teachers assume roles as mentors, references, and collaborators and where

FIGURE 2: EDUCATİON 4.0 FRAMEWORK *(WEF, 2020A AS CITED BY BOZKURT ET AL., 2021)*





> The levels of digital competencies that educators should have today are seen to be increasing. Emphasis is placed on the need for developing competencies related to how to integrate digital tools into the educational environment, rather than the mere use of digital tools.

digital transformations, virtualization processes, and innovative pedagogical technologies are applied (Miranda & Molina, 2020). **In the Education 4.0 concept, where educational designs linked to real-life scenarios are emphasized, skills such as digital literacy, problem-solving, and critical thinking are coming to the fore in educational environments** (Ramírez-Montoya et al., 2021). The facts that competencies are among the fundamental components of this period and that these competencies are expected be available among the stakeholders of education, with a focus on 21st century skills, indicate the importance of the issue.

Education 4.0 has brought about many changes in our perceptions of learning environments, learning styles, learning methods, the tools used, and the required competencies. Explaining the nine trends of Education 4.0, Fisk (2017) emphasizes distance and blended learning with flexibility of time and space, personalized learning, the freedom of students to decide how they want to learn, project-based learning, field experience, the ability to interpret data, evaluation of processes and projects, students' roles in designing and updating the curriculum, and the expectation that the mentoring role of teachers will become more prominent. All these trends highlight the fact that the responsibility for learning is shifting from teachers to students, and that students are migrating toward learning environments where they can structure their own way of learning more freely. In the World Economic Forum's report on the future of schools, the framework of Education 4.0 was discussed within the two categories of "content" and "experiences." In this context, attention was drawn to global citizenship skills, innovation and creativity skills, technological and social skills, and personalized ways of learning at one's own pace in a way that is accessible, non-selective, intended for problem-solving, collaborative, life-long, and student-focused (WEF, 2020a; Figure 2).

TEACHER COMPETENCIES

In this digitalized world and this changing education system, the examination and development of the competencies of teachers, who constitute one of the most fundamental pillars of education, is an issue that needs serious attention. Among the variables that have an impact on the quality of education systems and educational outcomes, such as curricula, teachers, students, administrators, parents, and the environment, teachers have the greatest power to influence the other variables and exert the strongest effect on the quality of education (Gültekin, 2020). Therefore, it is important to improve the lifelong learning of teachers and help them to maintain good attitudes (Ramírez-Montoya et al., 2021; Serdyukov, 2017).

When learning environments are arranged in line with the possibilities offered by technology, the roles of teaching change significantly. For this reason, educators should use developing technology in such a way as to ensure maximum benefit, to remain open to lifelong learning, and to constantly make efforts to improve the education being offered. Teachers should be trained and helped to improve in such a way as to meet new requirements and have balanced personal, social, professional, and technological competencies (Ramírez-Montoya et al., 2021). In listing teacher competencies, authors emphasize that teachers should be positioned as guides who encourage thinking, facilitate learning, and bring knowledge closer to students' reality; they also state that teachers should be digitally competent, entrepreneurial, collaborative, lifelong learners who are sensitive to ethical issues, who have high empathy and strong organizational skills and interpersonal intelligence, who work as a team, and who can develop students' leadership, communication, critical thinking, and creativity skills (Figure 3).

In recent years, fundamental changes and arrangements have been made in both curricula and educational approaches to enable students to acquire the skills of the 21st century. Peredrienko et al. (2020) stated that characteristics such as innovativeness, problem-solving, creativity, critical thinking, investigative personality, and entrepreneurship should be strong in teachers, and they also emphasized the importance of encouraging students to acquire these characteristics. Teachers are expected to create

FIGURE 3: QUALIFICATIONS THAT TEACHERS ARE EXPECTED TO HAVE TO MEET THE NEW REQUIREMENTS
(RAMÍREZ-MONTOYA ET AL., 2021)



an atmosphere suitable for improving the competencies of students, and it is also important for teachers to improve their own teaching styles, motivations, skills, competencies, self-assessments, self-efficacies, creativities, responsibilities, teaching autonomies, innovative personalities, working conditions, supportive policies, and abilities to remain free from administrative pressures (Serdyukov, 2017).

The levels of digital competencies that educators should have today are seen to be increasing. Emphasis is placed on the need for developing competencies related to how to integrate digital tools into the educational environment, rather than the mere use of digital tools. The importance of digital competencies is emphasized in terms of how information technologies can be used in teaching processes, measurement and evaluation activities, and the structuring of curricula (Kivunja, 2013; Bozkurt, 2021). The European Framework for the Digital Competence of Educators (Redecker, 2017) appears to be effective in terms of examining learner competencies along with the professional and pedagogical competencies of educators and addressing strategies that can be followed to strengthen learners and support their digital competencies. In this context, the emphasis on constant professional development, self-managed and cooperative learning, strategies for the use of digital resources, and the supporting of digital competencies is important (Figure 4).

Redecker's (2017) discussion of the technological competencies of educators together with their professional and pedagogical competencies, subject-specific competencies, and learner competencies is compatible with the framework called TPACK, which represents the unity of "technology, pedagogy, content, and knowledge." The following mistakes, which are common behaviors related to the integration of technology into educational environments (Mishra & Koehler, 2006), pose obstacles for education to reach its potential to meet the world's new requirements:

- Teaching technology instead of teaching through technology
- Ignoring the unity of technology, pedagogy, and content knowledge
- Not searching for general solutions, ignoring the complex nature of technology integration and the context

It is not enough to simply include technology in educational environments and have stakeholders learn how to use that technology. Technology applications need a solid theoretical foundation based on purposeful, systemic research and sound pedagogy (Serdyukov, 2017). Therefore, if technology is positioned independently of pedagogy and content knowledge, with its use not being based on a solid theoretical foundation, various confusions will ensue in educational environments and its contributions to achieving learning goals will be limited.

STUDENT COMPETENCIES

Among the stakeholders who are most directly affected by the digital transformation in education, students are actually the de-

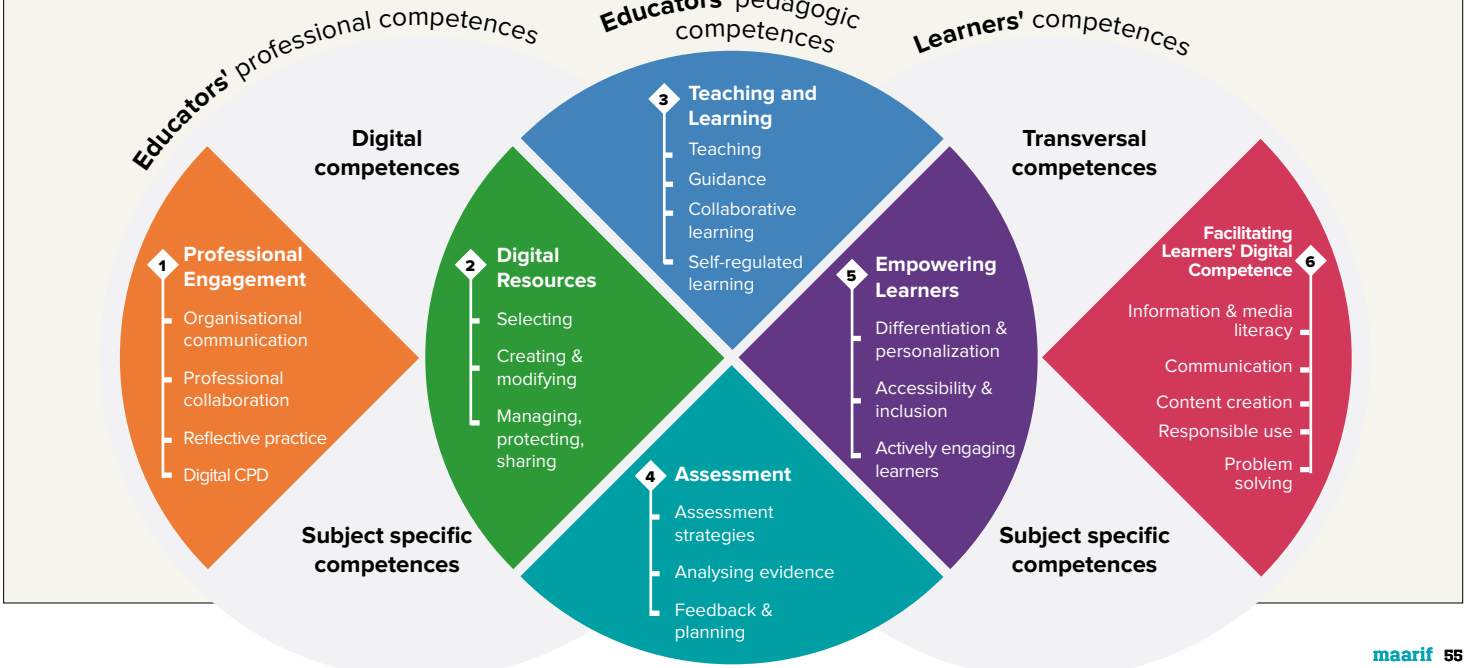
terminants of how and why education will be constructed. The primary focal point of innovation in education should be on the theory and practice of teaching and learning, as well as on the students, parents, society, and culture (Serdyukov, 2017).

Generation Z students, also called "digital natives," are defined by Kozinsky (2017) as the members of a generation wanting to make their own decisions on learning, who enjoy interactive environments and problem-solving, who are always open to learning everywhere, who have strong collaborative working skills, and who are addicted to digital tools. For Generation Z, it is important to be able to achieve unlimited learning anywhere and anytime, to access new information easily, and to integrate into learning processes through digital tools whenever needed. Hussin (2018) also states that Generation Z has adopted a more applied learning style, whereby they can be directly involved in the learning process. Considering the technological competence levels of Generation Z as well as their learning profiles, different from those of previous generations, it is possible to understand that they need new learning styles and teachers who are technologically competent like themselves (Hernandez-de-Menendez et al., 2020). Therefore, it is necessary to review the competencies of all stakeholders in education and develop new methods and resources to enable students to develop the expected skills while offering them high-quality education.

When the World Economic Forum's Future of Jobs Report is analyzed, the professions described as being in high demand indicate the importance and future of digitalization, and the importance of improving students' digital competencies and thinking skills can be understood (Figure 5). As can also be seen from this report, the demand for professions that mostly entail machine-intensive work is expected to decrease in the near future, and those professions are predicted to be replaced by professions devoted to ensuring machine and data control (WEF, 2020b). Therefore, it is understood that competencies such as organization and risk and stress management will gain more importance along with the digital competencies that students will show in fields such as big data, artificial intelligence, machine learning, digital marketing, and software and data security.

In order to be prepared for the developments of the fourth industrial revolution, students of Generation Z need to have skills such as analytical thinking and innovation, active learning, complex problem-solving, critical thinking and analysis, creativity, originality and initiative, leadership, technology use, monitoring and control capabilities, technology design and programming, flexibility, stress tolerance, reasoning and problem-solving, emotional intelligence, troubleshooting and user experience, service orientation, systems analysis and evaluation, persuasion, and negotiation (WEF, 2020b; Figure 6). When these skills are analyzed, we see that self-management skills such as active learning, resilience, stress tolerance, and flexibility are heavily

FİIGURE 4: EUROPEAN FRAMEWORK FOR DIGITAL COMPETENCE OF EDUCATORS *(REDECKER, 2017)*



emphasized in this report, in contrast to skills such as critical thinking, analysis, and problem-solving that were at the top of the agenda in previous years. With the shift to emergency distance education due to the COVID-19 pandemic, it was seen once again how important self-management skills are, and, as stated by Ferrel and Ryan (2020), skills of self-adaptation and change, which are two important skills in the field of education, have become more important.

This new vision for learning encourages learners to not only gain the necessary skills and knowledge but also to identify the appropriate resources for gaining such skills and knowledge (Fisk, 2017). At this point, we more thoroughly understand the importance of creating smart learning environments, which enable students to adapt to changes, offer them opportunities to think, and consider their sensitivities (Spector, 2016). Since the differences in the methods and tools used to access information and the changing speed of access to information have an impact on the teaching process (Alakoç, 2003), the curriculum and the methods and tools used as well as the

FIGURE 5: FUTURE JOBS SURVEY *(WEF- WORLD ECONOMIC FORUM, 2020B).*

	INCREASING DEMAND		DECREASING DEMAND
1	Data Analysts and Scientists	1	Data Entry Clerks
2	Artificial Intelligence and Machine Learning Specialists	2	Administrative Secretaries
3	Big Data Specialists	3	Accounting, Bookkeeping, and Payroll Clerks
4	Digital Marketing and Strategy Specialists	4	Accountants and Auditors
5	Process Automation Specialists	5	Assembly and Factory Workers
6	Business Development Professionals	6	Business Services and Administration Managers
7	Digital Transformation Specialists	7	Client Information and Customer Service Workers
8	Information Security Analysts	8	General and Operations Managers
9	Software and Applications Developers	9	Mechanics and Machinery Repairers
10	Internet of Things Specialists	10	Material-Recording and Stock-Keeping Clerks
11	Project Managers	11	Financial Analysts
12	Business Services and Administration Managers	12	Postal Service Clerks
13	Database and Network Professionals	13	Sales Rep., Wholesale and Manuf., Tech. and Sci. Products
14	Robotics Engineers	14	Relationship Managers
15	Strategic Advisors	15	Bank Tellers and Related Clerks
16	Management and Organization Analysts	16	Street Vendors
17	FinTech Engineers	17	Electronics and Telecom Installers and Repairers
18	Mechanics and Machinery Repairers	18	Human Resources Specialists
19	Organizational Development Specialists	19	Training and Development Specialists
20	Risk Management Specialists	20	Construction Workers

FIGURE 6: SKILLS EXPECTED TO BE ACQUIRED BY 2025 *(WEF- WORLD ECONOMIC FORUM, 2020B).*

	SKILLS EXPECTED TO BE ACQUIRED BY 2025
1	Analytical thinking and innovation
2	Active learning and learning strategies
3	Complex problem-solving
4	Critical thinking and analysis
5	Creativity, originality, and initiative
6	Leadership and social influence
7	Technology use, monitoring, and control
8	Technology design and programming
9	Resilience, stress tolerance, and flexibility
10	Reasoning and problem-solving
11	Emotional intelligence
12	Troubleshooting and user experience
13	Service orientation
14	System analysis and evaluation
15	Persuasion and negotiation

learning environments themselves should be restructured considering the changing needs of students. While designing a curriculum suitable for the digital transformation, it is important to create flexible course designs that allow for connection with the real world (Ramírez-Montoya et al., 2021) and to enrich the education provided with a variety of methods and tools.

CONCLUSION

In the digital information age, the changing social structure and developing technology also affect the structure of education, and changes are occurring in the roles of learners and teachers and in their expected competencies. Considering the studies suggesting that knowing how to learn will become more important than basic literacy skills in the future (Gibson, 2011; Toffler, 1970), the importance of learning to learn is being freshly understood again today. Dissemination of distance and blended learning activities at all levels, together with changes in pedagogical approaches and learning models as a result of the acceleration of digitalization due to the COVID-19 pandemic, have brought to the fore skills such as self-management, individual learning, digital competencies, and the ability to change. Rather than providing information, teachers' guiding and mentoring roles are becoming more dominant while the development of learners' critical thinking and problem-solving skills as well as skills such as active learning, resilience, flexibility, management, organization, and communication and social aspects are gaining more importance. To encourage the skills expected to be developed in students, teachers and other stakeholders in education have the responsibility of creating suitable learning environments, offering different methods and tools, creating flexible lesson designs and referring students to appropriate resources, structuring learning on a professional basis, and, to make all that possible, exerting continuous effort to learn by improving their own competencies. It is important for educators to use developing technology in such a way as to ensure the maximum benefit, to develop their competencies related to the integration of digital tools in the educational environment, and to be able to use technology on the basis of a purposeful, systematic, and solid pedagogy in teaching processes, measurement and evaluation activities, and the structuring of curriculum.

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Vocational Qualifications Authority: **Quality-Assured Certification**

There are a variety of public and private institutions operating at primary, secondary, and higher education levels to prepare human resources with the features desired by society and the business sector all around the world. These institutions issue documentation of competence (diplomas or certificates) to those who have received education. However, in the business world, there is a large workforce comprising individuals who have not participated in this educational structure but who are still equipped with sufficient knowledge, skills, and competencies. The Vocational Qualifications Authority has been established in Turkey to document the competencies of these people, also called **self-taught** people, to transform the expectations of the business world into professional standards and to measure and evaluate individuals' knowledge, skills, and competencies regardless of where they learned. The structure, duties, authorities, and responsibilities of this institution are analyzed in this article.

The Vocational Qualifications Authority (Mesleki Yeterlilik Kurumu: MYK), established by the decision of the Grand National Assembly of Turkey on September 21, 2006, constitutes a part of Turkey's EU harmonization process with the EU acquis and standards in the field of education, training, and youth.



Turkey, certificates confirming the knowledge and skill acquisition of individuals are issued by a variety of public and private institutions. Studies on including these documents, which may include diplomas, certificates, driver's licenses, and others, into the national qualifications and ensuring their international recognition were initiated in 2005 by the Ministry of National Education (*Milli Eğitim Bakanlığı*: MEB) and the Council of Higher Education (*Yükseköğretim Kurulu*: YÖK).

In the meantime, there is a large labor force comprising individuals colloquially known as **"self-taught,"** who have received non-formal training, on-the-job training, or informal learning without being involved in formal education. For a person who doesn't have a document showing his or her knowledge, skills, and competencies, it is not easy to apply for jobs or change his or her company. He or she also feels more vulnerable among formal educational graduates in society. It is obvious that if such people have an officially recognized certificate of competence, their social status will be enhanced, they will have increased self-confidence and joy in life, they can apply for the jobs they want more easily, and labor and employer unions can communicate with them more easily.

Within the scope of the **Strengthening the Vocational Education and Training System Project** carried out by the MEB, meetings attended by the Ministry of Labor and Social Security (Çalışma ve Sosyal Güvenlik Bakanlığı: ÇSGB), MEB, YÖK, public and private institutions, labor and employer unions, and related NGOs were held in 2004, and a legislative proposal was prepared for the approval of the Grand National Assembly of Turkey in order to establish and operate the **National Qualifications System (*Ulusal Yeterlilik Sistemini*: UYS)**, in accordance

with the EU qualification principles. Thus, the **Vocational Qualifications Authority (*Mesleki Yeterlilik Kurumu*: MYK)** was established with Law No. 5544 dated September 21, 2006 (MYK, 2006a). In other words, the MYK is an institution established with bottom-to-top movement with the cooperation of related institutions, organizations, sectors, and NGOs.

The **Turkish Qualifications Framework (*Türkiye Yeterlilikler Çerçevesi*: TYÇ)** is the national qualifications framework designed to be compatible with the **European Qualifications Framework**, which covers all qualifications acquired through vocational, general, and academic education and training programs including primary, secondary, and higher education programs and other ways of learning. The creation of the TYÇ is a part of the ongoing harmonization with the EU acquis and standards in the field of education, training, and youth and Turkey's harmonization with the EU. In this context, the duties of the MYK in relation to the TYÇ were specified in Law No. 5544 (MYK, 2006b). In Turkey, considering any qualification as a national qualification means that the state of the Republic of Turkey recognizes and guarantees that qualification. It has been stated that any inclusion in the TYÇ necessitates quality assurance (ÇSGB, 2011).

2. THE STRUCTURE, DUTIES, AND QUALITY ASSURANCE OF THE VOCATIONAL QUALIFICATIONS AUTHORITY (MYK)

The MYK (Figure 1) has a public legal personality, administrative and financial autonomy, and a special budget. In terms of administrative law, it is an institution related to (not affiliated with) the Ministry of Labor and Social Security (ÇSGB).

The main duties of the MYK as determined by law are as follows:

1) To determine the National Occupational Standards and National Qualifications;

FIGURE 1.
ORGANIZATIONAL CHART OF THE VOCATIONAL QUALIFICATIONS AUTHORITY
https://www.myk.gov.tr/index.php/tr/teskilat; accessed on June 28, 2021

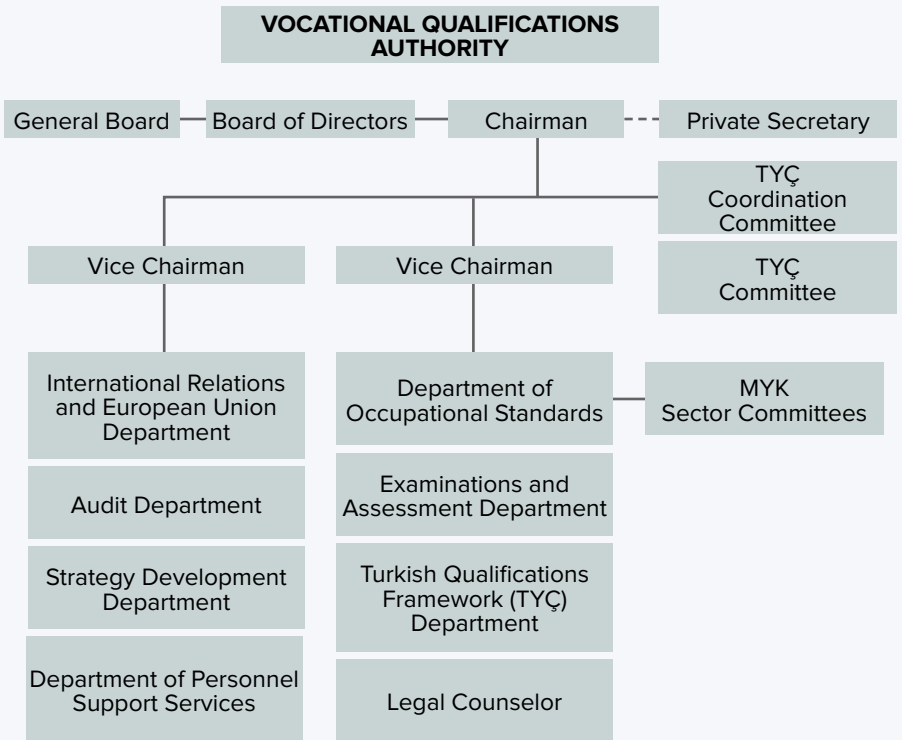
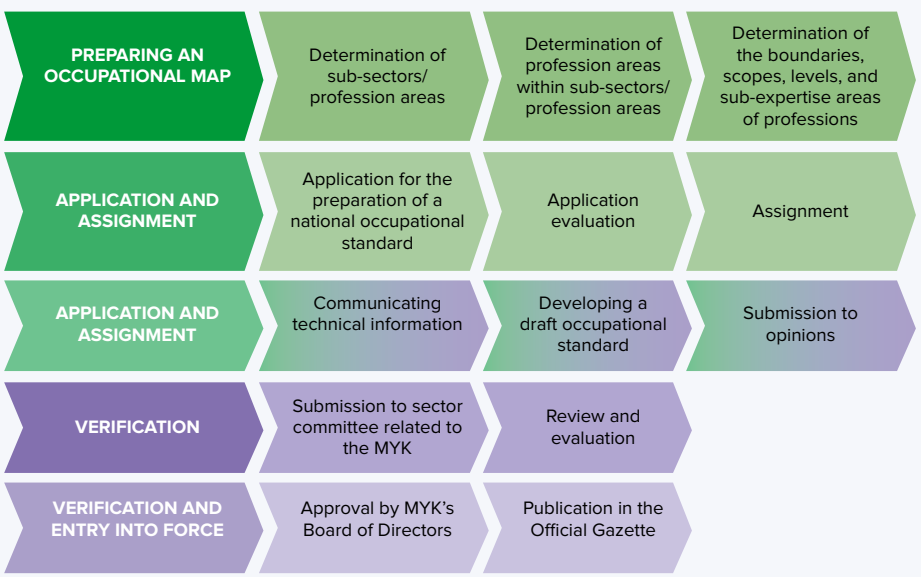


FIGURE 2: NATIONAL OCCUPATIONAL STANDARD PREPARATION PROCESS





> Occupational standards are prepared by professionals who are active in the professional field in question, and they can become national occupational standards if they are reviewed and adopted at the national level.

2) To establish and operate measurement, evaluation, and certification systems;

3) To provide accreditation of education and training institutions;

4) To create and improve the National Qualifications Framework (KHK, 2011);

5) To ensure the quality assurance of all qualifications related to vocational and technical education;

6) To serve as the National Coordination Point;

7) To prepare the references of proficiency levels and European Qualifications Framework levels within the scope of the National Qualifications Framework;

8) To ensure the participation of all relevant stakeholders in the process of all studies.

Within the scope of the **Lifelong Learning Strategy Document and Action Plan,** the MYK was assigned the task of supporting and promoting lifelong learning (MEB/TTK, 2010). Organizations that want to carry out examination, measurement, and evaluation activities in accordance with national qualifications apply to the MYK and those who meet the stipulated conditions are given the authority to do so.

3. THE NATIONAL OCCUPATIONAL STANDARDS (UMS), THE EDUCATION SECTOR, THE RECOGNITION OF PRIOR LEARNING, AND SECTOR COMMITTEES

The professions for which standards will be prepared are determined by the MYK Board of Directors, taking into account the priority needs of the job market and educational institutions as well as the recommendations of sector committees. The National Occupational Standards (UMS) are the minimum norms reflecting the necessary knowledge, skills, attitudes, and behaviors as approved by the MYK for ensuring the successful practice of a profession. The preparation process and steps of the UMS are shown in Figures 2 and 3.

The Use of National Occupational Standards in the Education Sector

Occupational standards are prepared by professionals who are active in the professional field in question, and they can become national occupational standards if they are reviewed and adopted at the national level. National occupational standards prepared by the relevant sectors in the business world can be used for a variety of purposes: 1) To determine the scope and content of occupational and professional qualifications; 2) To define learning outcomes based on knowledge, skills, and competencies in education and training programs; 3) To form the bases of various competence levels of companies or institutions; 4) To clarify the bases of various professional qualifications and their differences from each other; 5) To grant business licenses in the industry and service sectors; 6) To assess and improve skill levels and operational efficiency.

National occupational standards are used in the preparation of mostly competence-based learning outcomes, which cover the knowledge, skills, and competencies of programs in both formal and informal education systems. Of course, preparing a training program for each profession leads to a quite expensive training system. Therefore, as seen in the standards approved by the International Standard Classification of Education (ISCED), an education program under an education standard is designed in such a way as to cover more than one occupational standard (ISCED, 2013).



Recognition of Prior Learning

One of the most important functions of national occupational standards as well as national qualifications prepared based on them is to make it possible to document the knowledge, skills, and competencies gained in any way with a measurement and evaluation system.

Sector Committees

Sectors in the fields of manufacturing and service are represented by 27 sector committees. Sector committees consist of representatives from the business world (labor and employer unions), ministries, and fields of education. In their fields of interest, sector committees carry out analyses, make recommendations, and form opinions to be submitted to the MYK's Board of Directors with the intent of enabling occupational standards prepared by institutions and organizations appointed by the MYK or by working groups formed for this purpose to be approved as National Occupational Standards (UMS), and to enable the relevant qualifications to be approved as National Qualifications.

4. APPLICATION OF ORGANIZATIONS TO THE MYK, ASSIGNMENTS, RE-EVALUATIONS, AND UPDATES

Organization(s) applying to prepare occupational standards should first prepare an "occupational map" for the relevant sector. While preparing the occupational map of the sector, the main sections of the sector (sub-sectors) are classified into groups and the occupations within each group as well as their boundaries and levels are determined. The purpose of an occupational map is to make an overall analysis of the sector, thus providing a general picture of sub-sectors, occupations, number of employees, key trends in the sector, employment characteristics, and priorities. An occupational map is also useful in providing a picture of occupations, being effective in more than one sector (horizontal). Thus, in a system of national qualifications, it will be possible for an employee trained in one field of a profession to begin working in another field of that profession requiring similar competencies after a certain learning process and in line with the demands of the job market.

After the preparation of the occupational map, the organizations in the relevant sectors or fields complete the application process by filling in an "Application Form for Occupational Standard Preparation" and submitting it with an ink signature to the MYK. These applications are evaluated based on the following criteria: 1) Ability to represent the relevant sector; 2) Evidence of partnership/cooperation regarding the active participation of the relevant social partners in the preparation process of the occupational standard; 3) Existence of the human resources required for the management of the occupational standard development process, in terms of both numbers and expertise, in direct proportion to the scope of the standards to be prepared and the volume of work to be done; and 4) Existence of the infrastructure required for developing professional standards.

If the MYK's Board of Directors makes

FIGURE 3:
STEPS OF NATIONAL OCCUPATIONAL STANDARDS





a positive decision after conducting the evaluations, a cooperation protocol is signed and then the preparation of the occupational standards is begun (Figure 3).

Individuals who do well in relevant exams are given a Professional Competence Certificate.

Re-evaluations and Updates

For the re-evaluation of the national occupational standards five years after their publication in the Official Gazette, first the institutions and organizations that developed them are called for re-evaluation. In cases where these institutions and organizations do not accept the re-evaluation request, national occupational standards are re-evaluated with the participation of working groups to be formed or other institutions and organizations that meet the criteria for preparing occupational standards.

Update requests from organizations are also evaluated, and if an update is deemed unnecessary, the justified decision is reported to the requesting organization. As a result of the evaluation of these requests, studies are carried out on updating the relevant national occupational standards. If the results of those studies show that the updates to the occupational standards include changes that significantly affect the level, scope, and boundaries of a profession, the updates are submitted for the opinions of the relevant parties.

> In a system of national qualifications, it will be possible for an employee trained in one field of a profession to begin working in another field of that profession requiring similar competencies after a certain learning process and in line with the demands of the job market.

5. NATIONAL OCCUPATIONAL STANDARDS AND NATIONAL QUALIFICATIONS THAT HAVE BEEN PREPARED

National Occupational Standards

The 859 national occupational standards that the MYK has prepared together with various institutions, accepted at the end of a variety of review stages, are presented in Turkish, English, and Arabic on that institution's website with all the content of the national occupational standard in pdf format, including the code number of the standard, name of the standard, the level, the sector, the organizations that prepared it, revisions, and the date and number of the Official Gazette in which it was announced. There are many occupational standards still being studied.

National Qualifications

The 526 national qualifications that the MYK has prepared together with various institutions, accepted at the end of a variety of review stages, are presented in Turkish, English, German, Russian, French, and Spanish on that institution's website, including the code number of the qualification, name of the qualification, the level, the sector, authorized certification bodies, approval dates and numbers, revisions, the pdf file, and remarks. There are many qualifications still being studied.

On the web pages given in this section, there are many pdf files prepared by the representatives of the relevant sectors, each of which has been prepared over the course of 12-15 months, and some of which have been revised and then reviewed by sector committees. These primarily concern the following: 1) People who want to obtain a profession at a certain level, 2) People responsible for human resources in organizations, 3) Labor and employer unions, 4) Educators who design vocational training programs, and 5) Relevant sectors, trade associations, and NGOs.

6. QUALITY ASSURANCE IN THE NATIONAL VOCATIONAL QUALIFICATIONS SYSTEM

The MYK has designed quality assurance for lifelong learning in accordance with the "Quality Assurance Principles for Qualifications in the National Qualifications

Frameworks or Systems Referenced to the European Qualifications Framework" as defined by the recommendations of the European Qualifications Framework, and it uses this system in all processes related to its activities (Figure 4).

The Ministry of National Education has a large institutional structure encompassing 22 million students and more than 1 million teachers. It has dealt with quality assurance studies based on communiqués and directives issued in different years; the Ministry of National Education's Quality Assurance Certificate was produced in 2020.

The Higher Education Quality Council was established within the scope of the Regulation on Higher Education Quality Assurance, which entered force upon its publication in Official Gazette No. 29423 of July 23, 2015, and then it was amended in accordance with the provisions of Additional Article 35 added to Higher Education Law No. 2547 with Law No. 7033 on the Amendment of Certain Laws and Decrees for the Development of Industry and the Support of Production dated July 23, 2015.

In conclusion, the institutional distribution of education, measurement, and evaluation (examination) approaches, certification, and quality assurance studies in Turkey has been specified (Table 1).

Various documents between qualification levels 2 and 8 issued by institutions in Turkey can be seen in Figure 5.

7. CONCLUSION AND DISCUSSION

With a modest number of staff members, the MYK considers as stakeholders the sectors, labor and employer unions, public institutions, and educational institutions that are active in manufacturing and service areas of the business world. Coordinating these stakeholders, the MYK defines and recognizes qualifications in cooperation with them. The MYK establishes and operates a national qualifications system



FIGURE 4: NATIONAL VOCATIONAL QUALIFICATIONS SYSTEM: KEY OUTPUTS AND PROCESSES

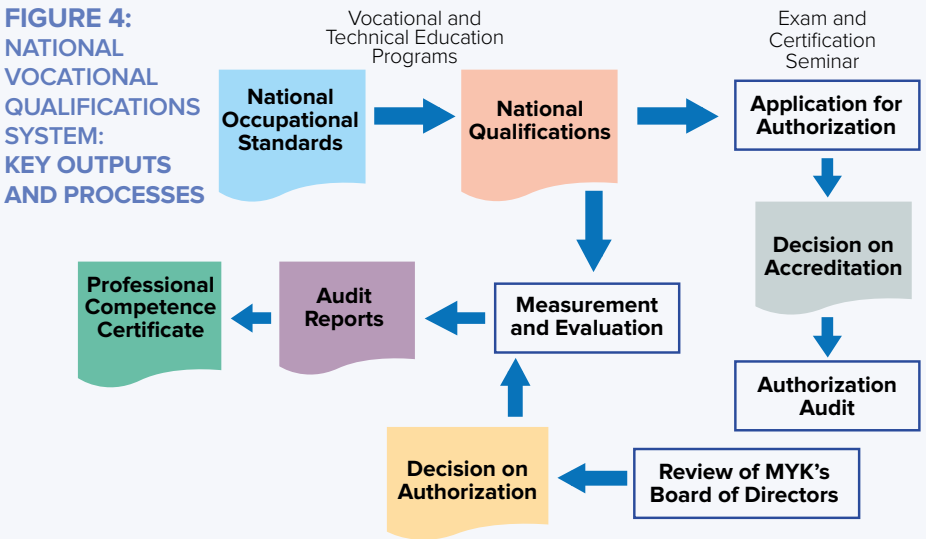


TABLE 1. INSTITUTIONS RESPONSIBLE FOR EDUCATION AND TRAINING, MEASUREMENT AND EVALUATION (EXAMS), CERTIFICATION, AND QUALITY ASSURANCE IN TURKEY

Institution	Education	Exam	Certificate	Quality
Ministry of National Education (MEB)	✓	✓	✓	✓
Council of Higher Education-Higher Education Quality Council (YÖK-YÖKAK)	✓	✓	✓	✓
Vocational Qualifications Authority (MYK)		✓	✓	✓
Private Education	✓			



that provides quality assurance at an international level. In this context, it has begun to become an internationally recognized, influential, and prestigious institution ensuring the compatibility of education with employment and leading to the creation of qualified human resources.

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FIGURE 5. EIGHT-LEVEL DISTRIBUTION OF QUALIFICATIONS SHOWN WITH DIPLOMAS, CERTIFICATES, AND DOCUMENTS ISSUED BY THE MINISTRY OF NATIONAL EDUCATION (MEB), TURKISH COUNCIL OF HIGHER EDUCATION (YÖK), AND VOCATIONAL QUALIFICATIONS AUTHORITY (MYK) WITHIN THE SCOPE OF THE TURKISH QUALIFICATIONS FRAMEWORK (TYÇ)

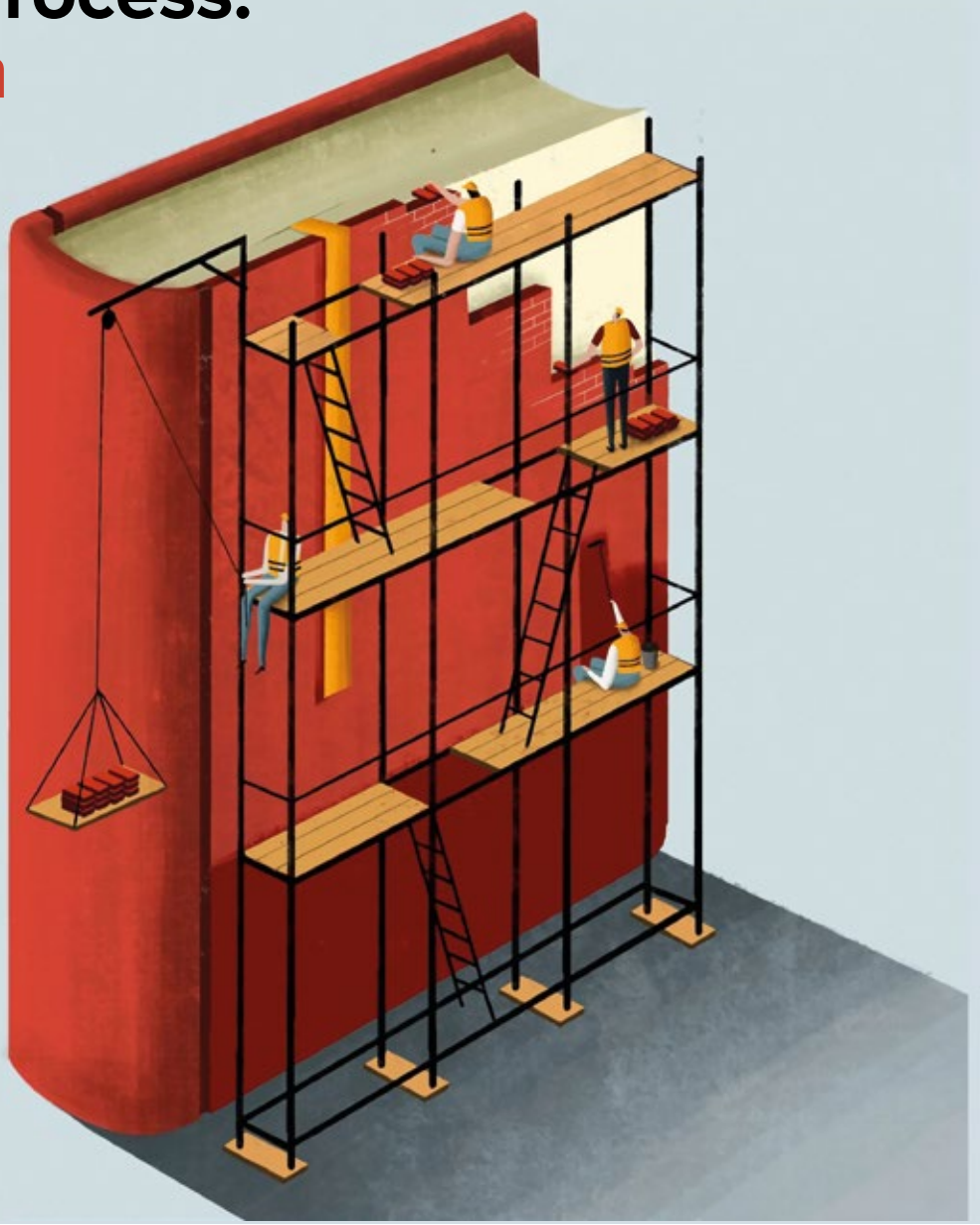
<table>
<tr><td>8</td><td rowspan="4">Higher Education Institutions</td><td colspan="2">Doctoral Diploma
(PhD, Proficiency in Art/PhD and Specialization in Medicine)</td><td rowspan="4"></td><td rowspan="9">MYK
Level 3
Professional Competence Certificate</td><td>Level 8
Professional Competence Certificate</td></tr>
<tr><td>7</td><td colspan="2">Postgraduate Diploma (With or Without Thesis)</td><td>Level 7
Professional Competence Certificate</td></tr>
<tr><td>6</td><td colspan="2">Bachelor’s Degree Diploma</td><td>Level 6
Professional Competence Certificate</td></tr>
<tr><td>5</td><td colspan="2">Associate Degree Diploma (Academic or Vocational)</td><td>Level 5
Professional Competence Certificate</td></tr>
<tr><td>4</td><td rowspan="5">M E B</td><td>High School Diploma</td><td>High School Diploma for Vocational and Technical Education</td><td>Certificate of Mastership</td><td>Level 4
Professional Competence Certificate</td></tr>
<tr><td rowspan="2">3</td><td colspan="2"></td><td>Journeyman’s Certificate</td><td></td></tr>
<tr><td colspan="3">Middle School Education Certificate</td><td>Level 3
Professional Competence Certificate</td></tr>
<tr><td colspan="3">Primary School Certificate
Level 2
Professional Competence Certificate</td><td>Level 2
Professional Competence Certificate</td></tr>
<tr><td>2</td><td></td></tr>
<tr><td>1</td><td colspan="6">Literacy, Beginning of Learning</td></tr>
</table>



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Education as a Construction Process: Constructivism

Constructivism means that each person builds up their own knowledge. In other words, it is individuals' creation of their own knowledge, just like a building under construction.



I believe it was the spring months of 2005. At that time, I was the principal of a private elementary school and a letter was sent to schools by the Ministry of National Education. In that letter, there were explanations regarding the curriculum to be implemented in elementary schools starting with the 2005-2006 academic year. At the same time, as a doctoral student, I started to examine the explanations in the letter and the curricula being published in the Ministry's *Journal of Announcements*. Radical changes were being made compared to the previous curricula. The most prominent ones involved achievement statements, constructivism, multiple intelligences, and project studies.

We held many meetings with our teachers regarding the new curriculum until the beginning of the 2005-2006 academic year. In the meetings, explanations about the new curriculum were constantly on the agenda and opinions were presented in that regard. In fact, a teacher with 35 years of professional experience stated in one of our meetings that constructivism was like *"teaching an old dog new tricks."* This teacher's statement raised the following questions in my mind about constructivism, which was one of the subjects that I had been working on as a doctoral student:

Did our teacher use the phrase "teaching an old dog new tricks" due to not fully understanding constructivism?

Could constructivism be implemented in classes with more than 40 students in Turkey?

Could the curriculum of a course be completed in one academic year? For example, could the achievements of the 6th grade mathematics program be taught to students in a single academic year?



Knowledge is subjective in constructivism. It has a personal meaning. Knowledge is created, interpreted, reorganized, and structured by the learners themselves. However, the restructuring process is not independent of the environment. Social and individual features are at play while knowledge is restructured.

In this article, I want to focus on the first question, overlooking the second and the third. It would be most appropriate to summarize the first question as follows: "Do we really know what constructivism is?" Accordingly, the answer to this question is quite straightforward, and in-service training sessions on constructivism can be organized to address a lack of knowledge...

Since I was a doctoral student in the field of curriculum development, the first thing I naturally did was conduct interviews with other teachers to see if there was a need for in-service training and, if so, on which subjects. In these teacher interviews, I realized that our teachers did have knowledge on constructivism to some degree. However, they wanted to acquire more knowledge so as not to make any mistakes while implementing the curriculum. We therefore prepared and implemented a training program limited to the competencies of a doctoral student. While explaining constructivism as the subject of this article, I first wanted to proceed based on the content of the in-service training program that we prepared. However, considering the necessity of also acting in accordance with my role today and with the feeling that I should add some new academic dimensions to it, I can explain constructivism as follows:

First of all, constructivism finds its meaning with many different words in Turkish. Although the conceptual content is exactly the same, there is no universal view as to what word to use for this concept in Turkish. It would be best in Turkish to use the word preferred by the Ministry of National Education - *yapılandırmacılık*. However, it should not be forgotten that other Turkish words are used in the same sense when discussing constructivism, such as *oluşturmacılık, oluşturmacı yaklaşım, oluşumcu yaklaşım, inşacılık, kurmacılık, bütünleştiricilik, bütünleştirici öğrenme, yapılandırma, zihinde yapılandırma, yapılandırıcı öğrenme, yapısalcı öğrenme, and konstrüktivizm.*

When the available studies are examined, it is observed that some authors state that the foundations of constructivism are based on ideas preceding the common era, while some base the understanding of constructivism on the opinions of Giambattista Vico, Jean-Jacques Rousseau, and Immanuel Kant, considered among the prominent names of the 18th century. Hans Vaihinger, John Dewey, Lev Vygotsky, and Jean Piaget are also among the prominent names of constructivism. Constructivism, which started to be expressed conceptually in the 1970s, has become a center of focus in the world and in Turkey since the 1990s. As a result of this focus, it was also added to the basis of the new curricula for our schools, which were prepared in 2004 and started to be implemented in the 2005-2006 academic year.

When we look around, we see that people have different physical characteristics from each other. Are the apparent differences between people just physical? Of course not! We perceive the physical differences immediately since we can see the physical structures of people. However, people's knowledge, feelings, thoughts, attitudes, needs, and experiences are also different. As social beings, humans individually regulate their knowledge, feelings, thoughts, attitudes, experiences, and needs according to the society in which they live.

There are structures in the human mind, such as a mathematical structure containing mathematical knowledge, a historical structure containing historical knowledge... We can better visualize such structures by associating them with the buildings under construction that we see around us. Think of mathematics, history, and similar structures in the human mind as constructions with only a foundation or as constructions that continue on to the first floor or the fifth floor... The mathematical structure in the mind of one person may resemble an ongoing construction whose first floor is still



being built, while in another person's mind, it may have been built up to the level of the fifth floor. When we consider a single individual, the mathematics structure in his or her mind may symbolically be at the level of the first floor, while the history structure may be a construction at a third-floor level. Connecting this to constructivism, it means that all people construct their own knowledge. In other words, it means that individuals create their own knowledge, just like a building under construction.

Knowledge is subjective in constructivism. It has a personal meaning. Knowledge is created, interpreted, reorganized, and structured by the learners themselves. However, the restructuring process is not independent of the environment. Social and individual features are at play while knowledge is restructured. In other words, learners restructure knowledge based on their opinions and experiences. Therefore, past experiences and readiness levels are crucial. Meaningful discovery of knowledge is present. Mental activities to make knowledge meaningful with different perspectives are quite important. They provide opportunities to those who want to have more knowledge. In other words, there is no limitation. The way that a student learns is more important than the teaching method of the teacher. Therefore, planning is undertaken by considering how students learn.

In constructivism, the qualifications that a student should possess are referred to as "achievements." Thus, targets and target behaviors in the curricula that began being implemented in the 2005-2006 academic year have been replaced with achievements. **Achievements are more general compared to target behaviors. Achievements are more flexible due to not having classifications. Achievements should be focused on in the learning process rather than the end of learning (products) and should be determined together by teachers and students.**

In constructivism, the qualifications that a student should possess are referred to as "achievements." Thus, targets and target behaviors in the curricula that began being implemented in the 2005-2006 academic year have been replaced with achievements.

Considering the contributions of constructivism for students, it increases students' eagerness to learn and enables them to be naturally motivated for learning. It helps them to better understand and internalize knowledge. It gives students an entrepreneurial spirit as they direct their own learning. It increases their interest in school and gives them a chance to express themselves. It increases the interactions between student and teacher. It provides students with opportunities to learn at their own levels and paces. It incites the curiosity to learn. It develops critical thinking. Students can control their own learning. Students can direct their learning together with their teachers. It develops the problem-solving skills of the students.

In constructivism, the teacher and the student determine the assessment criteria together. According to these determined assessment criteria, the student and the teacher conduct the process together. Assessment is the process in which decisions are made regarding the performance of the student. The performance of the student in group studies is also considered. Assessment is based on students' works (homework, projects), portfolios, classroom performances, rubrics, and checklists, as well as interviews conducted with students.

There are certain qualifications that constructivist teachers must have. First of all, they must know their students well. They must have sufficient information about the students' knowledge, skills, and behaviors. They must view students as individuals and consider their opinions. They should create a comfortable learning environment for them, ask appropriate questions, and enable them to think and gain different



The first ideas about constructivism were proposed by Giambattista Vico (1668-1744) in the 18th century. Vico claimed that people can only understand what they construct and stated that:
"Those who know something are those that can explain it."

perspectives. They should also give their students opportunities to ask questions and increase their morale and motivation by noticing and rewarding good work. They should provide opportunities for student-student communication instead of just establishing teacher-student communication. They should know and apply the methods and techniques of working with groups.

MODELS

Another issue that I would like to address in relation to constructivism is models. Today, three different models called "4E," "5E," and "7E" have been introduced. I want to address this subject in particular, with the thought that those who encounter it for the first time here will not make sense of the numbers and "E"s. The numbers here refer to stages expressed by English words starting with E. For example, the restructuring stages in the 5E model are as follows: 1. Enter/Engage, 2. Explore, 3. Explain, 4. Elaborate, 5. Evaluate. Thus, it is called the "5E" model because it includes five stages, the names of which all begin with the letter E. It will be helpful to examine the details of the stages of the 5E model to better understand the process of restructuring information.

Enter/Engage: This is the stage in which students are provided with the definition of their previous knowledge on the subject and their understanding of what they know.

Explore: This is the stage in which students work together or individually and think through research and produce opinions to solve a problem. This is the stage in which students are most active.

Explain: This is the stage in which the teacher helps students replace their previous knowledge with new knowledge. The teacher makes explanations to the students when necessary and asks them exploratory questions. This is the stage in which the teacher is the most active and most centrally located.

Elaborate: This is the stage in which students apply their knowledge to new situations. By applying their knowledge to new situations, they access information that they did not have before.

Evaluate: This is the stage in which the teacher evaluates the students by observing them and asking them questions, together with the students or considering the developments in the students themselves.

The 5E model has been explained here as an example, but the 4E and 7E models are other models that essentially reveal the restructuring process, with some differences in their contents.

In this article, I have tried to present you with information about constructivism. Regarding constructivism, which has been heavily criticized for its practicality, we need to think more about the answers to the question of "Is it teaching new tricks to an old dog, or is it a modern approach that is needed in the field of education where developments occur rapidly in today's world?"

There are certain qualifications that constructivist teachers must have. First of all, they must know their students well. They must have sufficient information about the students' knowledge, skills, and behaviors. They must view students as individuals and consider their opinions.



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The Pearl of the Caucasus

AZERB



BAIJAN

Azerbaijan - home of hospitable and kind people, a land rich in both underground and surface natural resources, and a sibling country of Turkey that adheres to the idea of "one nation, two states" in its relations with Turkey

Selçuk Baş

Azerbaijan Country Representative of the Turkish Maarif Foundation



Azerbaijan, located at the intersection of two continents in the South Caucasus, is a unique country that has a rich cultural heritage due to being historically located at the junction of cultures, religions, and trade routes.

Azerbaijan, with its ancient history and captivating nature, has been known as the "The Land of Fire" since ancient times. This is not coincidental by any means. This name was given to the country due to the fires that have been burning since ancient times on the Absheron Peninsula due to the spontaneous emergence of hydrocarbon resources. There are fires in certain places that have never gone out for centuries. The spontaneous combustion of soil in a place called "Burning Mountain" still attracts much attention from tourists.

Azerbaijan has a rich nature and a diverse landscape consisting of multiple mountain systems. The Greater Caucasus Mountains in the north, the Lesser Caucasus Mountains in the west and southwest, the Talysh Mountains in the southeast, and the wide Kur-Araz basin between them are the main systems that make up the topography of Azerbaijan.



CLIMATE

Various climate types are observed in Azerbaijan due to its geographical location and the differences in altitudes throughout the country. This has caused the vegetation of the country to be incredibly diverse. In Azerbaijan, forest-type vegetation is dominant in







Republic of Azerbaijan
Capital: Baku
Governance type: Unitary Presidential System

Official language: Azerbaijani
Area: 86,600 km^2
Currency: Azerbaijani Manat
Population: 10,119,000



regions with high altitudes while steppes are observed in regions with lower altitudes. Approximately a quarter of the country consists of forest areas. Nine out of 11 major global climate types are observed in Azerbaijan. Suitable climatic conditions, beautiful nature, and healing mineral water springs create important potential for the development of tourism in Azerbaijan.

ECONOMY

Azerbaijan, which experienced significant change with economic reforms after the collapse of the USSR in 1991, is considered to be a developing country. Oil and natural gas are among the important resources of Azerbaijan, which has rich underground resources. The country has made significant progress in the industrial sense by taking advantage of its resources such as iron, zinc, and copper. Furthermore, the tourism sector has a significant place in the economy of Azerbaijan.

NOTABLE CITIES

There are two important cities that must be visited by those who travel to Azerbaijan. One of them is, of course, Baku, and the other one is the notable culture and tourism city of Azerbaijan, Ganja.

EXCELLENT TASTES

Azerbaijani cuisine has tastes that resemble those of Turkish cuisine. In addition to delicious pastries, various soups and desserts are among the important elements of the food culture of Azerbaijan. The Azerbaijani dumpling called **dushbara**, the flatbread called **qutab**, and xengel (Georgian dumplings), also known as hinkal in Turkey, are some of the tastes that you must try. In Azerbaijani cuisine, similar to Turkey, kebab culture is dominant. The most popular kebab dish of the country is **lyulya kebab.** If you like kebab, you must try this taste that is unique to Azerbaijan. Other unique tastes of Azerbaijan are **dovga soup**, prepared using yoghurt and various vegetables; **jams,** which are an indispensable element of Azerbaijani culture and consumed with tea; and the pear soda known as **Düşeş.**



TRAVEL GUIDE

There are many historical sites and scenic beauties to be seen in Azerbaijan. The country has great tourism potential with all its riches. It is quite difficult to make a list of places that should not be missed during a trip to Azerbaijan. Among countless destinations, we have tried to include the most important ones.



Baku, Inner City

Inner City

Old Baku, also known as the Old City among locals and included on the UNESCO World Heritage List, is located in the heart of Baku, surrounded by the old city walls and incorporating many old houses and historical buildings. It is like an open-air museum that takes you on a journey through history. In this old city, it is possible to encounter people and environments that still keep the traditional neighborhood culture alive. You can take a stroll through narrow streets, visit museums, and taste the products of the rich cuisine at local restaurants and cafes. The most important historical buildings in the Inner City are the Maiden Tower and the Palace of the Shirvanshahs, which have survived since the 12th and 15th centuries, respectively.



Old Baku, also called the Old City, is like an open-air museum that takes you on a journey through history.

Bakü, Inner City

Palace of the Shirvanshahs

This palace, which belonged to the Shirvanshah state and has survived ever since the 15th century, is located in the Inner City. It has magnificent architecture. The complex, which has served as a museum since 1964, also includes a mosque, tomb, and public bath.

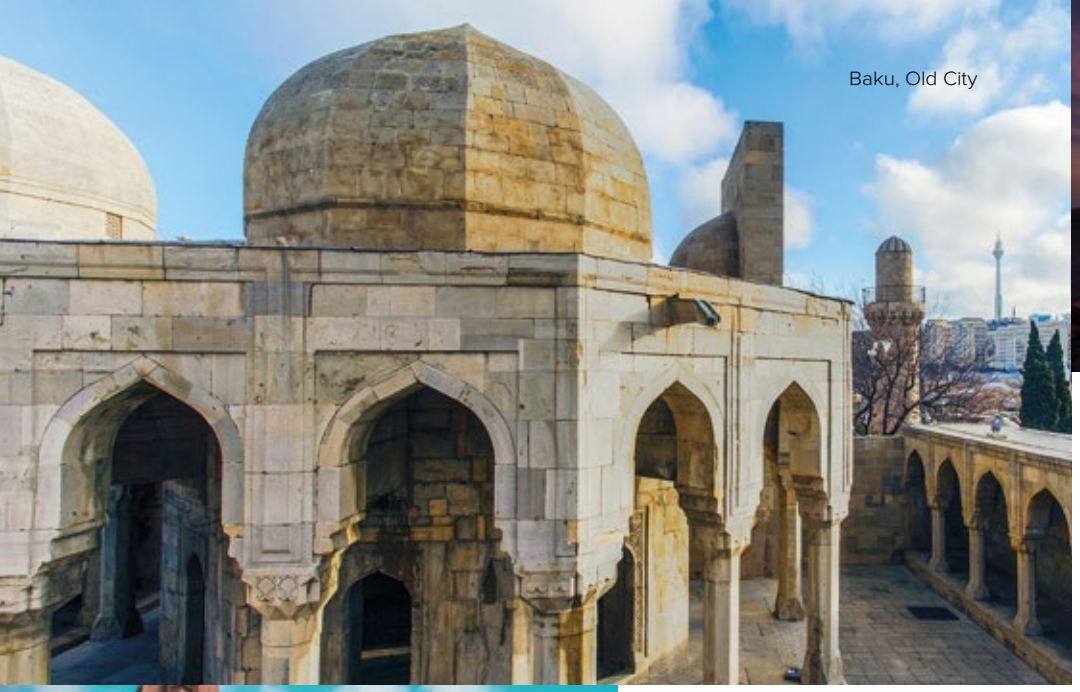


Palace of the Shirvanshahs



Green Bazaar

The Green Bazaar is the address for colorful tastes in Baku, with shops that are always open and village markets set up every day in the middle of the bazaar. Every day, products collected from all over the country arrive at the bazaar and are quickly bought by local people as well as tourists. Beluga caviar brought from the Caspian Sea is the most popular product of the bazaar. You can find Beluga caviar, which is obtained from sturgeon, at the most affordable prices in the Green Bazaar.



Baku, Old City





Gobustan National Park



Mud Volcanos

Mud Volcanos

These mud volcanos, rising like natural monuments, are like miniature versions of volcanos. Mud boils in the pools formed at the top of them. One-third of the mud volcanoes in the world are located in Azerbaijan and they provide one of the most sought-after raw materials for the cosmetics industry.

Fountains Square

Fountains Square can be called the meeting point of Baku considering that every street leads here. Nizami Street, which is closed to vehicular traffic, is one of the most beautiful streets of Baku with its historical buildings, cafes, and restaurants. The street offers a magnificent view, especially with its lighting in the evening.

Martyrs' Lane

This is the place where Azerbaijani and Turkish soldiers martyred in the Battle of Baku in 1918 are buried. It is the most suitable place for understanding the true meaning of "one nation, two states." A memorable visit awaits you at this huge monument that is constantly maintained, with the flags of these two countries constantly waving and a torch that never extinguishes.

Gobustan National Park

Located only an hour away from Baku, this open-air museum hosts artifacts of countless civilizations from prehistoric times to today. It is one of the most important places in the world in terms of archeology, where you can see traces of human life dating back thousands of years in the pictures and shapes drawn on the rocks. You can reach Gobustan National Park, inscribed on the UNESCO World Heritage Sites List, with daily tours departing from Baku.

Fire Temple (Ateshgah of Baku)

This building is one of the most important Zoroastrian temples in the world and dates back to about 4000 years ago. You can see a constantly burning fire in the middle; the cells around it were used by Zoroastrians as places of worship. You can get a lot of information about Zoroastrianism during your visit to Ateshgah, and you can also shop at the souvenir markets in the vicinity.

Burning Mountain (Yanar Dag)

You can visit this place if you are wondering why Azerbaijan got the name of "Land of Fire." It is a natural wonder formed by the burning of the natural gas leaking from underground for centuries. The flames never go out in this place, almost like a constantly burning hearth. You can reach the Burning Mountain, which serves as a museum, in half an hour from Baku.

In addition to these sites, you can visit "Mini Venice," where you will feel like you are in Venice with gondolas, and the Bibi-Heybat Mosque, which remains from the period of the Shirvanshahs and attracts attention with its ornamentation.

Baku is also a quite rich city in terms of museums. You can visit dozens of museums, such as the Azerbaijan National Museum of Art, Baku Museum of Miniature Books, National Museum of History of Azerbaijan, Azerbaijan Carpet Museum, Nizami Museum of Azerbaijani Literature, and National Museum of History of Azerbaijan.

From the "Last Victory" of the Ottoman Empire to the Shusha Declaration:

On the Course of Turkey-Azerbaijan Relations

Bakhtiyar Vahabzadeh reveals the essence and the source of Turkey-Azerbaijan relations in very concise language with this line: ***"Two sons of one mother."*** The relationship between Turkey and Azerbaijan is a brotherhood that finds meaning with the overlapping expressions of Gazi Mustafa Kemal Atatürk, the founder of the Republic of Turkey – ***"Azerbaijan's joy is our joy, and its sorrow is our sorrow"*** – and the general national leader of Azerbaijan, Heydar Aliyev – ***"two states, one nation."*** Without a doubt, the events that marked the 20th century brought along various obstacles to the strengthening of this brotherhood, but the Ottoman Empire, which fought against the great powers on all fronts from east to west and from north to south, came to the rescue for the last time for Azerbaijan. The liberation of Baku was the last victory of the Ottoman Empire after the victory of Kut. This victory in Baku was the key to the independence of Azerbaijan. In the period when plans were being made and maps were being redrawn, the people of the Caucasus were scattered with the occupation of the area by the Red Army; the independence process of Azerbaijan was short-lived and its territorial integrity was damaged. In this same period, the ties of Turkey with the Caucasus and Central Asia were severed and its doors that had been opened to the Turkic nations were closed; only the ties with the ***Nakhchivan Autonomous Republic*** were preserved. The ties of the Turkic societies in Turkey, the Balkans, the Caucasus, and Central Asia were also severed. After the 1950s, the books of some left-wing authors, which were published in Turkish only in Bulgaria, were delivered to the Caucasus and Azerbaijan as an instrument of communist ideology and for indoctrination purposes. However, the spirit of brotherhood was preserved through the works of poets and singers, being verbally carried in the hearts of the people.

Until the 1990s, our communication with the Turkic republics that continued their existence in a closed system within the borders of the USSR was limited. In the new era conceptualized by ***Glasnost*** and ***Perestroika*** in 1991, known as the "opening-up" policies of the USSR, the road for the independence of repressed societies was also paved. With the adoption of the Declaration of Independence by way of a referendum on October 18, 1991, Azerbaijan



Assoc. Prof. Dr. Cahit Bağcı
Ambassador of the Republic of Turkey, Baku

regained the independent status that it had lost in 1920 and it later became a member of the CIS. However, global powers, which had plans for both the Caucasus and the Caspian Basin, aimed at forcing the country into isolation by exploiting some internal political turmoil in Azerbaijan and encouraging Armenia to prepare for the occupation of Nagorno-Karabakh. Azerbaijan could not prevent the occupation of approximately 20% of its territory by Armenians in 1993. ***Haydar Aliyev***, with his governing experience, strategic thinking, perception, and far-sightedness, made political moves that saved the country from division and stabilized it while ensuring the restructuring of the state.

Most importantly, he prepared a contract for oil extraction and distribution, known as the "Contract of the Century," which recognized overlapping interests and ensured the "supply security" and "price stability" of oil for Europe. Relations between Turkey and Azerbaijan were re-established in this period and then crucial steps were taken for the advancement of those relations by signing agreements in many fields.

Despite four separate resolutions (Nos. 822, 853, 874, and 884) of the United Nations Security Council on the "withdrawal of Armenian forces from all occupied territories of Azerbaijan," the occupation continued for about 30 years and no international sanctions were imposed on Armenia. Despite the struggles of Turkey and Azerbaijan to defend the rights of the approximately 1 million people who were displaced from their homes and the 30,000 people who were martyred in the First Nagorno-Karabakh War, this issue has never been on the main agenda in any diplomatic medium due to the indifference and injustice of the international community. It is believed that when Haydar Aliyev passed away, he left only one final testament to his nation, and to his son and the new leader of Azerbaijan, President Ilham Aliyev. That testament was to liberate the Azerbaijani territories under occupation or, in other words, Nagorno-Karabakh.

In the last thirty years, Azerbaijan has developed and grown, diversified its economy in sectors other than oil and natural gas, and established strong economic and commercial relations with the East and the West. The agreements with Turkey were not only limited to mutually increasing trade and investments; they also extended to military cooperation agreements, and, in this way, military trainings, joint exercises, and strategic cooperation in the field of warfare were established. The importance of these agreements and cooperation was better understood with the attack of Armenia on Tovuz, a target of extremely strategic importance for Azerbaijan aside from Nagorno-Karabakh, on July 12, 2020. This attack ignited the fuse of a new era. Major General Polad Hashimov and twelve soldiers were martyred in this attack of Armenia, which had laid mines in the occupied lands for thirty years, dug trenches, and built up an air defense system with tanks, artillery, missiles, and rocket fleets. This attack was seen by the Azerbaijani public as the time to fulfill the final desire of Haydar Aliyev. Tovuz is the door that opens Azerbaijan to the West politically and economically, and the country's most important international oil and gas lines and highways pass through it. In fact, important projects such as the Baku-Tbilisi-Ceyhan oil line, the South Caucasus natural gas line as the beginning of the Trans-Anatolian Natural Gas Pipeline, the Baku-Tbilisi-Kars railway line, and the Baku-Georgia highway all pass through this city as a line with strategic importance, also known as the ***middle corridor***. In this sense, attacking Tovuz meant attacking the main artery of Azerbaijan as well as the interests



The Shusha Declaration, which is one of the most important instruments for regional peace, tranquility, stability, and prosperity, was signed in Shusha on June 15, 2021, by **Aliyev** on behalf of the Republic of Azerbaijan and **Erdoğan** on behalf of the Republic of Turkey.

of other countries that are a part of these projects. In line with this, the first and most stern statement was made by Turkish President Recep Tayyip Erdoğan, who evaluated this attack as an incident that "exceeds the caliber of Armenia." On the other hand, strategists agreed that this attack targeted Turkey's increasing activity in different regions and described the situation as igniting the fuse of a new regional conflict. Armenia's attack on a target other than Nagorno-Karabakh prompted Azerbaijan to prepare the road map for the "Battle for the Homeland" and a plan of operations. Turkey's political and moral support from the first moment of the attack was a major source of morale and motivation for Azerbaijan. The Azerbaijani army used its right of self-defense with the counter-attack that it launched on the morning of September 27, 2020, and took action with the order of "***strike***." For the first time in the last century, a nation rejoiced at the outbreak of war. Thousands of young people in Azerbaijan, whose ancestral lands were occupied, whose graves and holy places were destroyed, waited in front of recruitment offices to be recruited with the longing for victory and martyrdom.

Turkey's reaction to this incident, which was of extremely strategic importance for the future of the region, and the way in which President Recep Tayyip Erdoğan managed the situation, prevented the crisis from turning into a regional conflict, nullifying the plans of those who had provoked Armenia to create a new conflict and chaos in the region. The Second Nagorno-Karabakh War, which started with the harassment and attack of Tovuz, took on an unexpected shape. The Azerbaijani army launched operations on multiple fronts and liberated the villages, towns, and cities of occupied Nagorno-Karabakh one after another. Backed by Turkey's open political support, Azerbaijan achieved great military success and neutralized Armenia's air defense system. The Armenian military technologies neutralized by the Azerbaijani army on the Nagorno-Karabakh front are now exhibited in Baku, in the Military Trophy Park.

Occupied Nagorno-Karabakh was liberated in a short time of 44 days and a ceasefire agreement was signed in Moscow on November 10, 2020. Azerbaijan lost 2906 martyrs in this war with more than 8000 wounded individuals and veterans. In the words of an Azerbaijani poet, "one eye smiles while the other one cries." While one eye cries for the martyrs, the other eye smiles with the joy of victory. The victory brought joy and enthusiasm in Turkey as well as in Azerbaijan. Balconies in Azerbaijan were decorated with Turkish flags with the crescent and star, and balconies in Turkey with tricolor Azerbaijani flags.

The victory was marked proudly in Baku with hundreds of thousands of victory celebrants and parades on December 10, 2020, with the participation of President Erdoğan, who came to everyone's mind when President Aliyev referred to "my brother." The first instruction of Aliyev after the victory was to begin construction of ***Victory Road***, which stretches into the depths of Nagorno-Karabakh and from the foothills of the Southern Caucasus up to its peaks, and the construction of this road was entrusted to Turkish companies. Undoubtedly, deep and symbolic meanings are hidden in this decision in the sense that "the road to victory has been opened by Turkey." This decision was followed by the decision to build Fuzuli International Airport and to declare the ancient city of Shusha, which is the heart of the Caucasus, the pearl of Nagorno-Karabakh, and the crown of Azerbaijan, as the "cultural capital of Azerbaijan" on January 5, 2021. Nagorno-Karabakh symbolizes the incarnation of the brotherhood of Turkey and Azerbaijan and the notion of "two states, one nation." Turkey declared that it is ready to provide all kinds of support for the reconstruction and development of Nagorno-Karabakh and the healing of wounds. Azerbaijan, on the other hand, shows great determination to crown its glorious victory and re-establish Nagorno-Karabakh.

When the relations of Turkey and Azerbaijan are examined according to periods, they can be categorized as follows: the period up to 1920, that between 1920 and 1991, that between 1991 and 2020, and that after July 12, 2020, with the Second Battle for the Homeland, the Nagorno-Karabakh Victory, and the Shusha Declaration. The fourth period of relations, in fact, reflects many geopolitical and geostrategic periods. Azerbaijan having ensured its territorial integrity means that it becomes a stronger state in the region. The establishment of a strategic partnership and relations at an alliance level by Azerbaijan, among the trilateral mechanisms initiated by Turkey, undoubtedly also means strengthening both the establishment of Turkish unity and the basis of interest relations. Although the war is over and the ceasefire agreement has been signed, the fact that the maps of the approximately one million mines laid by Armenia in Nagorno-Karabakh have not been provided, the issue of Armenian prisoners, the border conflict, and the incomplete withdrawal of Armenians living in formerly occupied territories show that efforts to define this issue as the "Nagorno-Karabakh conflict" still continue in the international arena and in diplomacy, despite relevant UNSC resolutions. The accusations of Armenians against Azerbaijan and Turkey through international organizations and diaspora groups continue to increase, almost as if these two countries are defined and positioned as the only enemy.

In this respect, it is clear that there is a need for multifaceted cooperation between Turkey and Azerbaijan on international platforms and in diplomatic and political arenas. The efforts to establish a declaration of intention to develop the relations between the two countries on solid foundations and the competing efforts to keep the Azerbaijani land of Karabakh as a chronic "Nagorno-Karabakh" problem between Armenia and Azerbaijan both make it necessary for these two countries to act with a common strategy. The addition of new agreements to the existing political, military, economic, and commercial agreements between Turkey and Azerbaijan after the Nagorno-Karabakh Victory and new cooperation in the fields of education and culture reflect both the level and the strength of this relationship. *The recent transformation of Ankara and Baku into a platform of Turkic-language countries, especially in different fields, reveals the framework for a new era in terms of its ties with Turkey's "Asia Anew" vision.* The efforts of Turkey and Azerbaijan to open the Zangezur Corridor, which will enable them to meet and embrace both the Caspian Basin and the Turkic world, are aimed at shaping the future, establishing Turkic unity, and ensuring solidarity. This project is one of the most important tools for regional peace, tranquility, stability, and prosperity. The historical signatures of Aliyev on behalf of the Republic of Azerbaijan and Erdoğan on behalf of the Republic of Turkey, penned in Shusha on June 15, 2021, will ensure and guarantee this. The declaration signed in Shusha will determine the political and legal mechanisms for the establishment of an alliance relation between the Republic of Turkey and the Republic of Azerbaijan based on the principles of independence, sovereignty, territorial integrity, inviolability of internationally recognized borders, and non-interference in the internal affairs of states. These signatures are an oath to ensure the eternity of Turkey and Azerbaijan's friendship and brotherhood.



President Recep Tayyip Erdoğan, together with President of Azerbaijan Ilham Aliyev, whom he calls "my brother," salutes the parade at the Nagorno-Karabakh Victory ceremony.

Turkish Maarif Foundation's Activities in Azerbaijan

Although Turkey and Azerbaijan continue to exist as two separate states with a common historical and cultural heritage, the people of these two countries have never considered each other as a separate nation, but as brothers and sisters.

In November 9, 1991, Turkey was the first state to recognize the Republic of Azerbaijan, which had declared its independence on August 30, 1991. Turkey's relations with Azerbaijan are multifaceted and strategic. Intensive mutual visits of state officials are the most important driving force behind these relations. A tradition has been established that the state officials of the two countries visit the other country as a priority after taking office or following developments of symbolic significance.

In order to further strengthen bilateral relations, the High-Level Strategic Cooperation Council (YDSK) was established at the presidential level in 2010.

Meetings regarding the trilateral and quadrilateral mechanisms established with Azerbaijan are important in contributing to regional stability, peace, and prosperity.

The Nakhchivan Autonomous Republic, which is the only land connection between Turkey and Azerbaijan, has a special place in terms of our bilateral relations with Azerbaijan and enables us to have a direct bond with the Azerbaijani people.

Azerbaijan's victory in Nagorno-Karabakh and Turkey's support of its Azerbaijani brothers and sisters in this 44-day war brought the relations between these two countries to a new dimension. In many fields, steps have been taken to strengthen the military, political, and economic relations between the two countries. In the field of education, a protocol was signed allowing Turkish Maarif Foundation to operate in Azerbaijan.

COOPERATION PROTOCOL ON EDUCATION

With the "Cooperation Protocol on Education" signed between Turkish Maarif Foundation and the Ministry of Education of the Republic of Azerbaijan on May 20, 2021, the path was opened for Turkish Maarif Founda-



A cooperation protocol between Turkish Maarif Foundation and the Ministry of Education of the Republic of Azerbaijan was signed in the capital city of Baku.

tion to establish educational institutions in Azerbaijan.

President of Turkish Maarif Foundation Prof. Dr. Birol Akgün asked at the protocol signing ceremony: "What could be more natural than Azerbaijan and Turkey, which are countries of the same ancestry, culture, history, and geography, to cooperate in the field of education and to act jointly in science and culture, more natural than Azerbaijani youth studying at Turkish universities, than Turkey bringing the quality of Maarif schools to Azerbaijan?"

This cooperation protocol between Turkish Maarif Foundation and the Ministry of Education of the Republic of Azerbaijan was signed in the capital city of Baku.

At the meeting held at the Ministry of Education, the protocol was signed by Emin Amrullayev, Minister of Education of the Republic of Azerbaijan, and Prof. Dr. Birol Akgün, President of Turkish Maarif Foundation. Turkish Ambassador to Baku Assoc. Prof. Dr. Cahit Bağcı, Azerbaijani Deputy Minister Muhtar Mammadov, and Turkish Maarif Foundation Board of Trustees Member Prof. Dr. Cihad Demirli were present during the ceremony.

The protocol was established on the basis of the provisions of the "Agreement on Cooperation in Education between the Government of the Republic of Turkey and the Government of the Republic of Azerbaijan," signed between the Republic of Turkey and the Republic of Azerbaijan on October 31, 2017, and the provisions of the "Protocol between the Republic of Turkey and the Republic of Azerbaijan regarding the 7th High-Level Strategic Cooperation Council," dated April 25, 2018.



The official delegation gathered together at the signing ceremony of the cooperation protocol on education.





Prof. Dr. Bayram Çetin,
Gaziantep University, Dean of the Faculty of Education

On Education Reports

In the event that education reports are not interpreted correctly, it is not possible for criticisms to serve the purpose of improving our education system. In such situations where reports are not evaluated correctly and inferences are not made, deterioration of good practices and persistence of unproductive ones may occur.





Prominent organizations with their monitoring reports on international education research

National and international education research reports are frequently on the agenda in Turkey. These reports serve purposes such as obtaining information on the direction of change in a country's educational indicators, designing plans according to the information obtained, and creating policies. These reports can address many features such as student achievement, demographic characteristics of students, the emotional orientation of students toward school and their courses, characteristics of teachers, information about classroom teaching practices, and characteristics of classrooms, schools, and administrators.

INTERNATIONAL MONITORING REPORTS

The Program for International Student Assessment (PISA), which is the most popular in international education research, is a monitoring research program developed by the Organisation for Economic Co-operation and Development (OECD) and applied on an international scale. The main purpose of PISA, which is applied every three years, is to evaluate the ability of 15-year-old students in using the knowledge and skills that they have acquired at school in daily life. Another is the Trends in International Mathematics and Science Study (TIMSS), which is an assessment study developed and implemented by the International Association for the Evaluation of Educational Achievement (IEA) focusing on 4th and 8th grade students. The TIMSS aims to collect information about the success of students in the relevant classes in school programs. Another educational study conducted by the IEA is the Progress in International Reading Literacy Study (PIRLS).

In addition to international studies, there are also evaluation studies conducted at the national level. One of these in Turkey is the ABİDE (*Akademik Becerilerin İzlenmesi ve Değerlendirilmesi:* Monitoring and Evaluation of Academic Skills) study, conducted within the scope of four basic courses (mathematics, science, Turkish, and social studies), in which the information learned by the students in the 4th and 8th grades is measured in two-year periods with problems appropriate to real-life situations. Furthermore, reports are also issued for the exam held at the national level for placement in high schools and the YKS (*Yükseköğretim Kurumları Sınavı:* Higher Education Foundations Examination) held to evaluate students for university placement.

The Teaching and Learning International Survey (TALIS), which is not directly concerned with student success but considers learning-teaching at an international level, is also research conducted by the OECD. By taking samples from teachers and school administrators, the TALIS focuses on the school environment and teaching practices in the classroom, as well as the qualifications of teachers. The existence of education reports created with information obtained from small-scale or secondary resources should also be noted.

In particular, internationally applied tests cannot be developed considering the characteristics of all countries. They are developed on the basis of specific cultures and these measurement tools may reflect cultural biases. Although measures may be taken to address cultural bias, this may not always be the case.

ERRORS OBSERVED IN THE REPORTS

It is inevitable that the results created based on data collected in such studies will contain some errors. We can consider these errors within three categories:

1. Representation errors
2. Measurement errors
3. Interpretation errors

REPRESENTATION ERRORS

As stated above, educational research is conducted by selecting a smaller sample representing a large population. In Turkey, the number of students of each age or grade level is approximately 1,200,000. It is important that the sample being selected is large enough to represent the characteristics of this large group. For example, the PISA test was applied to 6890 students in our country in 2018. As a sample number, 6890 may have a representative ability that should not be underestimated. However, PISA does not consider students as the basic sample unit. It considers schools as the basic sample unit. Accordingly, 189 schools from Turkey participated in the 2018 PISA study. Students at the same school in secondary education in Turkey are generally very close to each other academically. In countries where students vary in terms of academic level, this situation may not be of great importance, but when 189 Turkish schools are selected as the sample from among schools that have students who are very close to each other in terms of success, the representative ability may be drastically low. In cases where the representative ability is low, the results of the research may be quite different from the actual facts.

Representation errors can cause misleading conclusions about the true levels of countries in international assessments. Assessments made at short intervals can yield very different results from each other. It is observed that Turkey faces a representation problem considering the decrease in 2015 PISA results and the increase in 2018. In the first volume of its 2018 report, the OECD explained this situation in Turkey as follows: "Considering the results of all years, it is clear that the PISA 2015 results are abnormal and

neither the decline between 2012 and 2015 nor the recovery between 2015 and 2018 reflect the long-term trajectory" (OECD, 2019).

One of the international assessment studies that can be considered as an alternative to the PISA reports is the TIMSS. Although there was a decrease in Turkey's PISA results in 2015, a decrease did not occur for the TIMSS, which also published a report in the same year. The ABİDE study, which is applied nationally in Turkey and uses much larger samples than international assessment practices, is functional for this purpose. It has features that can be used in policy-making by examining the country's educational status, not as an alternative to international assessment studies. ABİDE was applied in 2016 and 2018, and a trend similar to Turkey's long-term increasing trends in the PISA and TIMSS reports was observed.

Measurement Errors

The measurement tools and methods used in assessment studies, in which many characteristics are measured, such as students' academic achievement or school environment and attitudes toward lessons, may involve measurement errors. In particular, internationally applied tests cannot be developed considering the characteristics of all countries. They are developed on the basis of specific cultures and these measurement tools may reflect cultural biases. Although measures may be taken to address cultural bias, this may not always be the case. Considering the quality of the questions of the PISA application, the reading section includes extensive reading texts and the content of the texts does not only focus on literature. The number of informative texts is higher. Elements of daily life are prominent in the field of science. However, the quality of textbooks used in each country is different. Simply put, this will provide a bias in favor of countries where the quality of the used textbooks and the teachers' course practices coincide with the quality of the questions used in the PISA tests.



It cannot be claimed that the quality of education in schools with students with lower scores is worse. At most, it can be said that these schools are not more successful than other schools.

Furthermore, the PISA tests are prepared in English and then translated into other languages. Translations may not always be correct. Tests with translation errors also produce significant measurement errors.

Additionally, technical problems with computers and internet connections may cause measurement errors in some countries.

Interpretation Errors

Specified criteria are required to interpret the findings of education reports. The arithmetic mean is generally taken in international assessment studies. In PISA applications, criteria are based on OECD mean values, while in the TIMSS, the mean values of the countries are taken as the basis. This mean criterion is relative. It depends on the performance of other countries. One of the relative criteria used in international assessment studies is the ranking of countries. Another criterion is proficiency



COUNTRIES THAT PARTICIPATED IN THE TIMSS 2019 APPLICATION

Countries That Participated In The Timss 2019 Application

Germany	Philippines	Japan	Egypt
United States of America	Finland	Canada	Norway
Albania	France	Montenegro	Pakistan
Australia	South Africa	Qatar	Poland
Austria	South Cyprus	Kazakhstan	Portugal
Azerbaijan	Georgia	South Korea	Romania
Bahrain	Croatia	Kosovo	Russia
Belgium (Flemish)	Netherlands	Kuwait	Serbia
United Arab Emirates	Hong Kong	North Ireland	Singapore
Bosnia and Herzegovina	England	North Macedonia	Slovakia
Bulgaria	Iran	Latvia	Saudi Arabia
Czech Republic	Ireland	Lithuania	Chile
Taiwan	Spain	Lebanon	Turkey
Denmark	Israel	Hungary	Oman
Armenia	Sweden	Malesia	Jordan
Morocco	Italy	Malta	New Zealand

Benchmarking Units

Ontario - Canada
Quebec - Canada
Moscow - Russia
Madrid - Spain
Abu Dhabi - Uae
Dubai - Uae

Source: MEB



level. Proficiency levels are not a criterion dependent on the performance of other countries. Proficiency levels are also an important criterion in national assessment studies.

Of course, all of these criteria are important. However, the most important criterion for each country is its success in previous years. The long-term trajectory of change provides more accurate information on the direction and pace of performance. A comment such as "PISA: Turkey is below the OECD average in all fields" (source: Deutsche Welle Türkçe) can be used to express the performance of a country whose scores are quite close to the OECD mean scores in applications in different years. However, this would not be an appropriate comment for a country that had a difference of 68 points in science, 70 points in mathematics, and 65 points in reading compared to the OECD mean scores in 2015 and then decreased this difference to 21 points in science, 35 points in mathematics, and 21 points in reading. It is accepted that approximately 40 points correspond to one academic year in PISA assessments. Statements emphasizing nearly one year of progress in achievement over a three-year period would have been more appropriate for such headlines. If the statements about Turkey made in the 2018 OECD report were used as comments, they would indicate that Turkey had more than doubled the schooling rate among 15-year-old students since 2003 while achieving an upward trend of achievement.

Another misinterpretation of the results of education reports is due to unfair comparisons of achievement differences between school types. Placement in high schools in Turkey is made according to the scores from the central exam and, with the latest implementation, by adding school success to the scores of the central system. It cannot be claimed that the quality of education in schools with students with lower scores is worse. At most, it can be said that these schools are not more successful than other schools. It is not enough to simply look at results to see which type of high school contributes more to student achievement. A headline such as "High schools for religious education fail again" regarding the

> **The quality of textbooks used in each country is different. Simply put, this will provide a bias in favor of countries where the quality of the used textbooks and the teachers' course practices coincide with the quality of the questions used in the PISA tests.**

2018 PISA results does not reflect a correct assessment. Specialized studies are needed to see which types of high schools contribute more to student achievement.

CAN EXAM SCORES BE A MEASUREMENT OF QUALITY?

Comments that equate the quality of education with student placement exams make one of the most common mistakes. There is great competition among students who want to be placed in the most preferred departments via the exams held for selection and placement purposes. Few (perhaps 10%) of the more than 2.5 million students who take the exam each year will be successfully placed in those highly preferred departments. In this major competition, highly difficult questions are asked in order to eliminate students. Not being able to answer these questions does not indicate a poor education. If most of the students answered most of the questions correctly in these exams, the exams would not be able to fulfill their function.

After the 2019 results of the YKS (Higher Education Foundations Examination), a headline such as "Criticism after 15,000 candidates 'receive zero points' in YKS: Lack of basic skills training" may be aimed at creating a perception rather than making a comment. In Turkey, approximately 1.2 million students graduate from high school every year. However, more than 2.5 million students take the YKS. We do not have information about when these 15,000 candidates 'receiving zero points' graduated from high school or how much time had passed since their high school education. Therefore, there are no objective criteria for making such a comment. In the YKS, questions are not prepared according to defined skills. Only the secondary education curriculum is used as the main framework. Within this main framework, questions are prepared in a wide range. It is not correct to comment on the quality of education by looking at the results of these exams, which have a high degree of difficulty.

CONCLUSION

In the event that education reports are not interpreted correctly, it is not possible for criticisms to serve the purpose of improving our education system. The purpose of these reports is to lead to improvement, to identify deficiencies, and to ensure that the necessary arrangements are made based on these deficiencies. In such situations where reports are not evaluated correctly and inferences are not made, deterioration of good practices and persistence of unproductive ones may occur.

HALUK BAYRAKTAR:

"EDUCATION GAINS VALUE ONLY WHEN FACILITIES AND OPPORTUNITIES ARE AVAILABLE"



I think that we can achieve progress in technology by blending good education with good opportunities offered to students. Our young people can now fulfill their potentials thanks to today's Turkey investing more in technology.

Bekir Bilgili

In recent years, our country has been making highly advanced moves in industry and technology. The world is carefully observing a huge breakthrough here, especially in the defense industry. This development is extremely positive for the future of Turkey. At the same time, activities are being organized to attract young people's interest toward technology and science and to encourage them to work in this field. Festivals, courses, and competitions are being held. Haluk Bayraktar, Chairman of the Board of Trustees of the T3 Foundation, is one of the prominent names in Turkey's National Technology Move with both with his NGO activities and his business success. We had a long interview with Bayraktar about both his personal experiences and his work.

Considering both your position at Baykar Defense and the civil society activities that you are involved in, you are one of the prominent names in Turkey's technology advancements in recent years. I'd like to begin with this question: What is the "National Technology Move"? What are its short- and long-term goals?

I can say that the National Technology Move is an indispensable process for the develop-



> With the projects carried out by our state and some companies to reverse brain drain, we observe the return of people to our country in high numbers. There are many projects that these people can work on with the aim of making the National Technology Move a success.

ment of our country and for us to entrust a stronger and more prosperous Turkey to our future generations. Essentially, the National Technology Move is a stance and a strong objection against monopolization in scientific and technological developments. When you try to make predictions, especially about the future of the world, it is not difficult to see how powerful giant technology companies will be and that the sovereignty of countries will only be proportional to the technologies that they produce. *We must develop technology not only in the fields of defense and aviation, but also in all areas, with domestic and national means in such a way as to cover all areas of our lives.*

The National Technology Move has emerged to shape not only the present but also the future. Today, it is of great importance to develop technologies that continue to improve very rapidly and have great impact on our lives in every field, by our own means, both for our country to be prosperous and to serve humanity. If we are content with using the technologies offered to us by other countries, it does not seem possible for us to be strong and for our citizens to lead happier lives in the future. This is not just a matter of the development and strength of our country.

NATIONAL TECHNOLOGY IS THE SECURITY OF THE COUNTRY

So, you're saying that development in the field of technology is directly related to the security of the country...

One of the major examples of this is the death of many people due to COVID-19 in this current pandemic in countries where the production of intensive care respirators is lacking. The countries producing these devices banned the export of these products, the components used in them, and even basic consumable goods in order to primarily meet their own needs at the outbreak of the pandemic. Some countries confiscated the intensive care respirators that were going to be delivered to other countries. Giant technology companies took action to produce these devices, but many of them failed to succeed. Turkey, on the other hand, succeeded in making its own intensive care respirators ready for mass production in a short period of 14 days with the vision of the National Technology Move, which this country had already been actively carrying out for some time. Before the outbreak of the pandemic, these devices were developed by Biosys, which is an initiative that came to life with the support of the Ministry of Industry and Technology. During development activities, if it had been thought that such a device could already be imported and that there was no need to develop it with domestic means, perhaps many of our citizens would have lost their lives due to the shortage of intensive care respirators in our country. However, with the willpower that



we had as soon as the first COVID-19 case was observed in our country, these devices were made ready for mass production in a short period of 14 days and delivered to our hospitals.

As we see with this recent example, it is imperative that we develop our own technologies. *We must not only develop technologies that will save the day, but also present our own domestic and national technologies in a way that will serve humanity and our country in the future.* One of the most important steps of preparing for the future is to instill technology in our children and young people, and to encourage them to become producers, not consumers, of technology. The National Technology Move emerged from the bottom and was adopted by people from all different age groups, but it can only be successful when it is adopted by all segments of society.

> Our children, whose foundations are laid by taking courses such as software and robotics coding in the Deneyap Technology Workshops at a young age, are developing projects that will shed light on the future of our country with the education that they receive in high school and university.

How do you evaluate the current potential of our country at this point?

As everyone has been pointing out for years, our country has great potential. It has great potential with its geopolitical structure and young population. The important thing is to use this potential in the most effective manner. We are taking firm steps toward becoming a country that produces high technology with a skilled workforce. We must do our best for a Turkey that researches, develops, and focuses on production in all sectors. I have no doubt that we can use this potential in the most effective manner.

FROM SPARE PARTS MANUFACTURING TO UNMANNED COMBAT AERIAL VEHICLES: A SUCCESS STORY

You've had an interesting journey towards technology, and especially the aviation industry. Can you tell us a little about this process? How did you start; how did a business that was established to produce automobile parts reach the point where it is today?

There was an import substitution policy in the automotive industry in the 1980s. In that context, the main companies in the sector were subject to localization policies. Baykar was founded in this period, in 1986. It started its activities by producing micromachining parts in Bayrampaşa. It first produced tractor parts. Our father, Özdemir Bayraktar, who was a mechanical engineer and graduated from the Department of Mechanical Engineering of İstanbul Technical University, founded the company. Parts were produced for leading companies such as Uzel Traktör, Tofaş, and Otomarsan. Our father received a pilot's certificate from the Turkish Aeronautical Association in 1987. He always had an interest in aviation because of being a pilot. He loved to draw.

Then I graduated from Middle East Technical University [in Ankara] and went to Columbia University in America. Our technical manager, Selçuk Bayraktar, graduated from the Department of Electronics of İstanbul Technical University. From there he went to the University of Pennsylvania, in America, with a scholarship. He worked there in the GRASP [General Robotics, Automation, Sensing, and Perception] laboratory. Thus, as the second generation of the family, we turned to the field of unmanned systems. When Selçuk Bayraktar successfully completed his first formation flight test at U Penn, he was directly invited to MIT. His achievements in the field of robotics in America brought him to the fore. At MIT, he worked on a helicopter that could automatically land on a vertical wall. After MIT, he moved on to Georgia Tech. Both of these schools are quite advanced in aviation. The defense industry in the world was moving toward unmanned systems. Certain steps were being taken toward an aviation industry in Turkey in the first years of the Republic. However, those steps were interrupted. We were quite behind. We decided to enter this field in order to catch up with these developments.

GREAT THINGS ARE ACHIEVED WITH BELIEF AND PERSEVERANCE

You often emphasize the importance of motivation and opportunity. Do you think that young people today have better conditions for turning to technology studies than in the past? What would you say if you compared the current situation with your previous experiences?

Definitely... When we look at the past, we can say that our young people are luckier today. Especially since all the studies focused on the National Technology Move aim to encourage our young people to produce technology, more opportunities await them now than in

257.448 APPLICATIONS

DENEYAP TÜRKİYE

7137 STUDENTS



the past. You can't wait for opportunities to be handed to you on a silver platter to achieve something. *Most of the time, you have to create your own opportunities and chances. Great things come in life with belief and hard work.* Therefore, our young people should not wait for opportunities to be presented to them; they must be very determined and hardworking. Some of the obstacles and deterrence attempts that we experienced during our great efforts to develop unmanned systems, and that we can see at many different points in our history, are not and should never be an obstacle for our youth today.

Our young people have the chance to compete with their own projects in dozens of different categories at TEKNOFEST, the world's largest aviation, space, and technology festival, and gain experience accordingly. With the will of our state, TÜBİTAK and similar institutions are making great efforts to pave the way for our youth. Furthermore, as Baykar, we put great importance on our internship program. We see our students as the guarantee of both Baykar's and Turkey's future, and we invest in them. Last year, despite the pandemic, we took the necessary measures and ensured that more than 800 interns took part in the projects that we carried out during the summer period.



In short, when we think about how people like Hezarfen, Lagari, Vecihi Hürkuş, and Şakir Zümre could make great contributions in their respective periods but were hindered and stopped, we should make maximum efforts now to prevent the same thing from reoccurring. Our young people are a treasure for us as the guarantee of our future, and they are the ones who will carry the National Technology Move forward. I have absolute confidence that they can develop the most advanced technologies in the world as long as they make the most effective use of their opportunities and work hard.

AN OPPORTUNITY FOR YOUTH TO MEET TECHNOLOGY

One of the prerequisites for making progress in the field of technology is to receive a good education and to have opportunities to put it into practice. Can we say that Turkey is now at a point where it can offer opportunities and facilities to young people?

As you've pointed out, one of the prerequisites for developing technology is to receive a good education. However, if you do not carry out studies that will reinforce that education, it is very difficult for you to be successful. For years, one of the biggest obstacles to technological development in our country was that our well-educated young people did not know what to do after graduation. Young minds who couldn't work in relation to their educa-



tion in our country were going abroad. Our young people studying at universities graduated without putting their education into practice and could not carry out work that would make a difference in their professional lives. *Today, I believe that we've started to prevent such a situation, especially with* ***TEKNOFEST***. Our young people studying at high school and university level have started to form their own teams and participate in technology competitions in different branches. They participate in these competitions with their products and they compete fiercely to achieve a high rank. And the number of these teams is increasing exponentially every day. This is how they can reinforce the education that they've received at the university. And this is exactly how it should be. Now we have young people who launch rockets, build unmanned underwater vehicles, or design flying cars before they even graduate from university.

I think that we can achieve progress in technology by blending good education with good opportunities offered to students. Our children, whose foundations are laid by taking courses such as software and robotics coding in the Deneyap Technology Workshops at a young age, are developing projects that will shed light on the future of our country with the education that they receive in high school and university. Therefore, I can briefly say the following in answer to your question. Our young people can put their knowledge into practice by way of areas opened for them and develop concrete projects. By virtue of a Turkey that invests more in technology, our young people who graduate while reinforcing their education in this way can work in their own fields and contribute to our country with value-added products.

WE BRING YOUNG PEOPLE TOGETHER WITH SCIENCE AND TECHNOLOGY

You go to great lengths to share your experience with the new generation. For this, you are preparing environments such as DENEYAP workshops with the T3 Foundation, where young people receive applied technology education. Why is this education important?

As the T3 Foundation, we carry out work to increase the capacity of people trained in the fields of science and technology in order to ensure that our country can reach a prosperous future and ensure global justice. In this sense, our main goal is to raise young people who will be the architects of the National Technology Move for a technology-producing Turkey. In line with this goal, we have many projects in different fields.

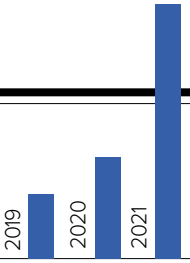
With the support of important institutions and companies in Turkey, we have been hosting the ***TEKNOFEST Aviation, Space, and Technology Festival*** for the last 3 years under the leadership of the Ministry of Industry and Technology and our foundation. Within the scope of TEKNOFEST, we aim to increase the interest and curiosity of people of all ages toward science and technology by hosting different technology competitions, air shows, workshops, and events. With the ***T3 Entrepreneurship Center,*** we organize training programs for entrepreneurship and we provide support such as offices, investments, mentoring, prototype workshops, and technical expertise for startups that apply to the T3 Startup Center and qualify for support. As the T3 Foundation, within the scope of the Science Turkey project, we bring children aged 6-14 together with science with our planetarium, applied workshops, and exhibition areas in science centers where we provide support in terms of concepts, educational content, and training for instructors. With our ***Science Turkey*** online workshops, we provide training workshops in the fields of astronomy, mathematics, design, technology, and natural sciences to children all over Turkey.

> We are taking firm steps toward becoming a country that produces high technology with a skilled workforce. We must do our best for a Turkey that researches, develops, and focuses on production in all sectors.

Within the scope of the National Technology Scholarship Program, we provide support to our scholarship holders, including undergraduate and graduate students, and we organize programs that will contribute to their personal and professional development. We provide transportation, material, and consultancy support to teams that aim to specialize in specific areas of technology and develop projects within the scope of our ***National Technology Teams Support Program.***

TEKNOFEST
Number of teams applying to competitions

39,684 2021 | **16,034** 2020 | **10,288** 2019







In the ***Deneyap Technology Workshops*** launched within the scope of the ***Deneyap Turkey*** projects that we carry out as the T3 Foundation in cooperation with the Ministry of Industry and Technology, the Ministry of Youth and Sports, and TÜBİTAK, we provide applied technology education on 11 different topics to middle and high school students who have passed the written and practical exams and earned the right to participate in the workshops. Within the scope of this 36-month free education program, our students begin to become competent in basic technology areas, acquire the ability to produce projects, experience production projects in teams, and participate in national and international technology competitions. Our main goal in these workshops, which are located in 31 different provinces from Edirne to Hakkari and which we aim to spread all over Turkey, is to train future researchers, software developers, engineers, and entrepreneurs and the technology-producing generation of the future, who will actualize the National Technology Move. In line with this goal, we offer free applied technology education to young people who have potential all over our country.

In the Deneyap Technology Workshops, our students, who are still in middle and high school, experience technology education at the graduate level in fields such as design and production, robotics and coding, electronic programming and the internet of things, advanced robotics, cybersecurity, energy technologies, mobile applications, aviation and space technologies, software technologies, nanotechnology and materials science, and artificial intelligence. By using the skills they acquire in the workshops, our students begin to focus their education in the fields of technology that they are interested in at a very early age compared to the average in Turkey. To date, we have received 257,448 applications to our workshops and we currently continue to provide education to 7137 students who earned the right to participate in this educational program.

> We provide applied technology training on 11 different topics to middle and high school students who qualify to receive this education in the ***Deneyap Technology Workshops.***

WE HAVE GAINED MOMENTUM IN THE DEFENSE INDUSTRY

What is the position of Turkey in aviation and the defense industry?

As a country, we are steadily progressing toward our goals. We've begun reaping the fruits of the vision of nationalization guided by political will from the early 2000s. At that time, the rate of national products in the defense sector was around 15%, and it's reached 70% today. We produce many critical platforms and systems nationally. Furthermore, we have created a very strong production ecosystem for the subcomponents that give life to these systems, which are just as important. We reflect the power of our production ecosystem in the field in countless projects, some of them being the Bayraktar ***AKINCI TİHA [Turkish Unmanned Aerial Vehicle], MİLGEM [National Warship Project], the T129 ATAK Attack Helicopter, and the HİSAR Air Defense Systems.*** These developments are attracting attention around the world. For example, *British Defense Minister Ben Wallace* emphasized that Turkish UAVs [unmanned aerial vehicles] and UCAVs [unmanned combat aerial vehicles] have great impact in the field. Francis Fukuyama,



a scholar who influences world politics, writes that UCAVs have made a significant contribution to Turkey's rise as a regional power in 2020. He states that Turkey's use of UCAVs will change the nature of ground power in a way that will shake up the existing power structure. There are also studies that support these developments statistically. SIPRI [the Stockholm International Peace Research Institute] reported that Turkey's arms imports have decreased by 59% in the last five years compared to the previous five-year period. SIPRI also emphasized that Turkey has increased its arms production and reduced its dependence on imports. These are crucial developments for our country. We have come a long way, but we need to expand the momentum that we've gained and continue moving forward.

One of your important activities is the SAHA EXPO. Can you tell us a bit about it? What is the SAHA EXPO? What are its aims?

The ***SAHA EXPO*** is one of the important projects carried out by ***SAHA İstanbul [Defense and Aerospace Cluster Association],*** the second largest industrial cluster in Turkey and in Europe. Today, SAHA İstanbul brings together under its roof 630 members, 17 of which are universities, and companies operating in 51 different production sectors. We can briefly define the SAHA EXPO Defense, Aerospace, and Industry Fair as a platform of cooperation and promotion of our domestic and national defense and aviation companies. We originally planned to hold SAHA EXPO 2020 at the İstanbul Expo Center on March 25-28 with the participation of professional visitors from 39 countries of the world. However, we postponed holding the physical fair until November 2021 in order not to endanger the health of the participants due to the coronavirus pandemic that has affected the whole world. Afterwards, we decided to do something new and hold an event in the virtual world. In order to do so, ***BİTES***, a company of our member ASELSAN, developed a virtual fair application called XperExpo. Thus, we held SAHA EXPO as the world's first 3D virtual defense industry fair. Within this SAHA EXPO, which opened its doors in a virtual environment on November 9, 2020, more than 300 companies and organizations exhibited their products in 3D. The fair functioned on a 24-hour basis until April 9, 2021. Participants of the SAHA EXPO sent free and unlimited invitations to potential customers all around the world. The people they invited viewed the 3D products and catalogs in the virtual stands, watched product promotion videos, and held many online meetings. Thus, with SAHA EXPO, which played an important role in ensuring communication within the sector during the pandemic, the path was paved for new collaborations. We aim to organize SAHA EXPO 2021 at the İstanbul Expo Center between November 10th and 13th in 2021.





> We can briefly define the SAHA EXPO Defense, Aerospace, and Industry Fair as a platform of cooperation and promotion of our domestic and national defense and aviation companies.

TURKEY NOW PROVIDES OPPORTUNITIES FOR QUALIFIED MINDS

In the past, one of the most important issues of our country was the departure of qualified and well-educated people abroad,



which was called "brain drain." You are one of the examples that shows that this process can also work in reverse. Has Turkey been able to create the necessary infrastructure to keep its qualified youth in the country? Is there anything more that needs to be done about this?

In the past, many of our valuable scientists and engineers were going abroad, thinking and seeing that they couldn't work in the fields that they wanted to in our country. As you mentioned, Baykar is one of the most important examples of how brain drain can be prevented. Selçuk Bayraktar, as Technology Leader of our company and also as Chairman of the Board of Trustees of the T3 Foundation, emphasized a very important issue related to our country, although it seemed to be related to himself, in the closing speech of the demo flight that we carried out at TAI Facilities in 2005. Selçuk Bayraktar, who told the delegation about the work he had carried out in the USA, pointed to the project that we had done with this demo flight and he asked: "Where would I be working in Turkey if this project did not exist?" I would like to say that there was no environment in Turkey at that time in which a Turkish engineer who had put forth such serious studies on such a new technology could be employed. As we can see from this example, many of our scientists and engineers went abroad, especially since they could not work in our country in their fields of expertise. Selçuk Bayraktar, on the other hand, chose to stay here and pave the way for us, and he accomplished the successful works that you see today. These achievements set an example for our well-educated citizens abroad. We are seeing now that there is a very intense return with the projects for reverse brain drain being carried out by our state and some companies. Many projects that these people can work on are being carried out in Turkey since, with the National Technology Move, our country aims to be a country that develops and produces its own technology. Thus, valuable minds are returning to the homeland and serving their country. I hope that more of our scientists and engineers abroad will return to our country and take part in major projects here.

> You cannot see young people being so eager to develop technology in every country. As Baykar, we know that it is our duty to support them.

Where do you see our country in the near and distant future, taking into account the needs and expectations of the new generation?

Recently, our young people have been more interested in science and technology than ever before. This is of great importance for the future of our country. The important thing is to support these young people in the short term and prevent their self-confidence from waning. They will shape our future as we take care of them. You cannot see young people being so eager to develop technology in every country. It should be our main duty, as Baykar and all Turkish value-added companies that are producing technology, to consider supporting our young brothers and sisters and encourage them to take steps in this direction. Parents in our country have always advised their children to be civil servants, thinking of their well-being. Now we see families encouraging their children to build rockets or build and fly drones, and believe me, these examples are not limited. Girls who build model planes with their fathers, young people who store their rockets in baggage compartments of intercity buses and travel to rocket competitions, these are really the biggest fortune of this country. At this point, we've seen great support from the families. We see a brighter future for our country thanks to parents who share the excitement of these young people and make them even more excited. It is our goal to leave a more prosperous and powerful country to the new generations. Families do their best to ensure that their children can live in the best conditions. At this point, besides working to leave a better country for them, they also encourage their children to make the country even more beautiful. As long as we listen to the wishes of the new generation and support them, I think there is nothing they cannot achieve.

Prof. Dr. Oktay Sinanoğlu **A Lifetime Dedicated to Science, the Turkish Language, and Culture**

With his identity as a scientist and the importance that he attached to the Turkish language and culture, Oktay Sinanoğlu duly maintained the legacy that he inherited. Prof. Dr. Sinanoğlu, who passed away on April 19, 2015, worked for the recovery and development of the Turkish language from the invasion of foreign languages, and he passed the torch that he himself had taken from many previous scientists, artists, and statesmen to the educators and intellectuals of the next generation.

Hatice Sena Kardaş



Oktay Sinanoğlu is known for his achievements in his academic life and his studies on that path, as well as the importance that he attributed to Turkish language and culture. As is known, Turkish has been under the influence of other languages both because it is a language spoken across a wide geographical area and because the Turkish nation has encountered and interacted with many different nations and tribes throughout history. For this reason, many steps have been taken from past to present to protect the Turkish language and to create a Turkish consciousness. This Turkish consciousness, which showed its brilliance in the work entitled *Dîvânu Lügati't-Türk*, written by Mahmud al-Kashgari in 1076 to show the richness of the Turkish language, gained momentum with the declaration of Turkish as the official language of correspondence by Karamanoğlu Mehmed in 1277, and it was finely interwoven with the language of Yunus Emre, which we call *sehl-i mümtenî* [or epigrams] today. Finally, with the works of Âşık Paşa and Gülşehrî, the consciousness of producing works in Turkish was strengthened. This consciousness has re-

> A Turkish youth who knows Descartes but has never heard of Ghazali is unthinkable.



ached the present day by being carried from generation to generation for centuries, like a torch, by scholars, artists, and statesmen. One of the most important bearers of this torch was undoubtedly Oktay Sinanoğlu. He has a very important place in history in terms of holding science in one hand and Turkish language and culture in the other. Prof. Dr. Sinanoğlu mentioned the richness of the Turkish language at every opportunity in the conferences and programs that he attended. His respect and love for Turkish was so strong that he delivered every speech he gave in Turkey in Turkish during the 43 years he spent in this country, in spite of living abroad for many years. The following words of Oktay Sinanoğlu are remarkable in terms of the importance that he attributed to our language: **"Naturally, Turkish is spoken with Turks: would it not be strange to think otherwise?"** In addition to the various programs and conferences he attended, he also explained his ideas on this subject in various journals and he wrote many books explaining his thoughts on the protection and development of Turkish, in addition to his fields of study such as molecular biology, quantum mechanics, physics, chemistry, and mathematics. The most important of these works was *Bye Bye Türkçe: Bir Nev-York Rüyası* ["Bye Bye Turkish: A New-York Dream"], which was published in 2001. In this work, he emphasized that Turkish is a rich language and that the language of education in Turkey should be completely Turkish, and he pointed out the importance of Turkish as a scientific language.

OKTAY SİNANOĞLU AGAINST FOREIGN LANGUAGE EDUCATION

In Bye Bye Türkçe, Oktay Sinanoğlu underlined that aside from the teaching of other languages in universities, the language of education should be Turkish, and he emphasized that education in a foreign language would cause cultural genocide. Moreover, he strongly opposed the adoption of English words and concepts into our language as Turkish started to come under the influence of English. This was because people perceive the world in the words of their own language and interpret events within the concepts of the society in which they live. Thus, words have a crucial place in the construction of our world of thought. Education in a foreign language causes students to construct their own worlds of thought with the words of another language and to think with the words of that language. In such a case, people begin to move away from the words and concepts of their own language and the world of thought built by those words. They forget their own language and culture and cannot transfer them to future generations. As a result, the native

The Road to Becoming One of the World's Youngest Professors!

Oktay Sinanoğlu, who was born on February 25, 1935, in the Italian city of Bari, returned to Turkey with his family after the outbreak of World War II. In 1953, he graduated from TED Ankara Yenişehir High School, ranking first in his graduating class. He went to the USA in the same year and graduated from the Department of Chemical Engineering of the University of California in Berkeley in 1956, again ranking first. He received his MSc degree in chemical engineering from the Massachusetts Institute of Technology in 1957 and was awarded the Alfred Sloan Award that same year. He completed his doctorate at the University of California in 1959. Oktay Sinanoğlu, who later started to teach at Yale University as a faculty member, gained the title of professor at the age of 26, creating a mathematical theory that could not be solved for 50 years. With this success, Sinanoğlu became Yale's youngest professor of the century. Rapidly climbing the academic career ladder, he was nominated for the Nobel Prize twice, as well as winning many important awards such as the TÜBİTAK Science Award, the Alexander von Humboldt Research Award, and the Sedat Simavi Science Award for his studies in molecular biology and chemistry throughout his academic life.

> If Turkish becomes obsolete, so will Turkey. Turkey becomes obsolete with education in a foreign language.



He chose Yale University despite receiving academic offers from many universities. At the age of 26, he received the title of professor, becoming one of the youngest professors Yale had seen in the last 300 years.



language tends to be forgotten within about one or two generations. Sinanoğlu underlined all these dangers in his book and offered many solutions, such as establishing national universities that completely use Turkish as the language of education.

TURKISH AS A SCIENCE LANGUAGE

One of Oktay Sinanoğlu's thoughts that carried the sensitivity to Turkish into another dimension was his belief that Turkish could be a truly scientific language, contrary to the opinion that it was a weak language that could not meet the needs of the current age. Sinanoğlu claimed that the Turkish language is a very convenient language for producing scientific concepts due to its algebraic structure:

"The Turkish language has a structure that is rarely observed in other languages. As Western linguists state with admiration, its rules are precise and distinct, as if they were arranged by a mathematician; it is a language that can derive itself from within, can adapt to every new subject, that every Turk can easily understand, and that enriches as it is processed with newly derived words."

He proved this claim by working on *Fiziksel Kimya Terimleri Sözlüğü* ["Dictionary of Physical Chemistry Terms"] and *Fizik, Kimya, Matematik Ana Terimleri Sözlüğü* ["Dictionary of Main Terms of Physics, Chemistry, and Mathematics"] and by developing Turkish terms in response to some English scientific terms in those works. Turkish is also a convenient language for deriving new words and concepts that can meet the needs that arise with the rapid development of science and technology. With this feature, it is of great importance for us to keep up with the ever-changing and transforming age:

"Language is a process, because the concepts constantly develop, become obsolete, change, and new ones emerge in their place. Language also develops with the concepts and keeps being processed according to its production ability. Fortunately, the Turkish language incorporates these derivational and developmental structures and rules the most."









A philosopher who thought in Turkish

With his works, Oktay Sinanoğlu successfully proved that studies in science and philosophy can be carried out in the Turkish language.



A FINAL WORD

With his identity as a scientist and the importance that he attached to Turkish language and culture, Oktay Sinanoğlu duly carried the torch that he had inherited. Prof. Dr. Sinanoğlu, who passed away on April 19, 2015, worked for the recovery and development of the Turkish language from the invasion of foreign languages, and he passed the torch that he himself had taken from many previous scientists, artists, and statesmen to the educators and intellectuals of the next generation. Let us conclude this article with sentences proving how Oktay Sinanoğlu passed that torch to Turkish scientists, intellectuals, and educators:

"We, as Turkish intellectuals and Turkish scientists, will join humanity with equal rights and honor. Our education will not be an education system that serves foreign cultures and purposes and only leads to imitation and fabrication. Turkish intellectuals will know how to protect their own education, their own language, their culture and dignity, as well as their independence."

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An Institution That Revolutionized Education:
The İnas Sanayi-i Nefise Mekteb-i Âlisi

The İnas Sanayi-i Nefise Mektebi Âlisi (Girls' Fine Arts School), opened in 1914, has become an educational institution symbolizing the struggles of Turkish women to gain a place in the field of art.

Research Assistant Gülden GÜNAYDIN
İstanbul University-Cerrahpaşa



The *İnas Darülfünun,* or Women's University, started education on October 24, 1914, in the righthand section of the Zeynep Hanım Konağı building.



Ömer Adil, "Girls' Workshop"

Art first proved its power with its political function of strengthening the central authority of monarchies, followed by its function of creating cultures based on nationalism after the Industrial Revolution. It has also had an important role in self-expression as an important part of culture combined with the creativity of imagination. When the various functions of art are examined, it is observed that it has a physical function in architecture and design, together with a social function in promoting social change in social issues by addressing aspects of collective life. Art is subjective and indefinite in terms of its personal function and it sometimes comes to the fore with its ability to put thoughts into action, create order and peace or chaos, and sometimes simply exist without having any special purpose.[1] In social relations, art is an effective tool in creating common behaviors and introducing new perspectives. Art, which is a cornerstone in the education of the human spirit, also has indispensable importance as an effective tool in the development of educational institutions and education programs (Özbek, 2010).

ART EDUCATION AND WOMEN

Art education in Europe continued in guilds with the master-apprentice tradition for men from the 6th and 7th centuries. By the 15th and 16th centuries, guilds had begun to decline, a new type of art education emerged, and art academies began to be established in Italy and France. One of the leading institutions, the Royal Academy of Arts, was founded in London in 1768, while the National School of Fine Arts (École des Beaux-Arts, formerly known as *Académie Royale de Peinture et de Sculpture*) was founded in Paris in 1648 to provide art education to noble and well-educated men. On the other hand, art education for women in the Middle Ages was limited to copying and illustrating manuscripts in monasteries; later, art education became more widespread and attracted the attention of wider masses (Bell, 1963; Dilmaç, 2011). However, the admission of women to



Mihri Hanım, in the front row, with the students and teachers of the İnas Sanayi-i Nefise Mektebi, 1919

The clothes, the way of sitting, and the prayer beads of Naile Hanım, the mother of Ali Rıza Bey, who was one of the founders of the Committee of Union and Progress, former ambassador to Vienna, and mayor of İstanbul, all bear the traces of the period. Although the details of the house are also seen here, the dominant feeling of this painting is immortalized in the face of Naile Hanım as an authoritative and strong female figure...



art academies only began with the accidental admission of a female student to the Royal Academy of Arts in England in 1860, and 34 more female students were admitted to that school between 1860 and 1870. The first admission of female students to the École des Beaux-Arts in Paris was in 1897 (Tunç, 2018).

As the Industrial Revolution in Europe brought developments in every field in the 19th century, the Ottoman Empire also started to renew the state and social structure. In the conditions of the 19th century, the regulations brought by the Imperial Edict of Reorganization (*Tanzimat Fermanı*) and Imperial Reform Edict (*Islahat Fermanı*) were insufficient, and the belief in and desire for change as led by intellectuals gained more importance in the Constitutional Period. The freedom of thought brought by the Second Constitutional Period and the existence of equality of men and women among the Turks with the effect of the Turkism movement were instrumental in the differentiation of the social position of women within the relevant sociocultural structure. In this period, which was important for the intellectual movements that would set the stage for the Republic (İnalcık, 2008), women tried to assert their presence in social life by making demands on issues such as their positions, rights, participation in working life, and socialization, as well as their duties as good wives and mothers, with the changes and modernization of social life (Çakır, 2016). One of the sources of these efforts of women to earn rights in social life in the Second Constitutional Period was the numerical increase that accelerated in women's education during the rule of Abdülhamid II.

EDUCATIONAL INSTITUTIONS FOR WOMEN IN THE OTTOMAN EMPIRE

Although the first teachers' school of the Empire, opened under the name of *Dârülmuallimîn* in 1848, was for male students, the *Dârülmuallimât*, opened in 1870, provided higher education opportunities for women and opened the way for them to become teachers. During the Second Constitutional Period, the number of *Dârülmuallimât*s reached 423 and these schools started to be opened in rural areas, as well. In the efforts made for the education of women and girls, the value and importance that Abdülhamid II gave to education after he ascended the throne is noteworthy. Abdülhamid II adopted the first Ottoman constitution, *Kanun-i Esâsî*, on December 23, 1876, which guaranteed that everyone had the right to education and training. The number of Girls' Fine Arts Schools, which were established in the period of Abdülhamid II in order to develop the handicraft skills that were important issues in the education of girls at that time, and to profit from their production, increased to 3 with the opening of the Dersaadet Girls' Fine Arts School in 1884 and the Üsküdar

The number of Girls' Fine Arts Schools, which were established in the period of Abdülhamid II in order to develop the handicraft skills that were important issues in the education of girls at that time, and to profit from their production, increased to three with the opening of the Dersaadet Girls' Fine Arts School in 1884 and the Üsküdar Neharî Girls' Fine Arts School in 1890.



Ms. Mihri Müşfik



Neharî Girls' Fine Arts School in 1890 (Çolak, 2013). In 1887, there were 9 high schools for Muslim girls and 21 high schools for boys in İstanbul, while in 1907-1908 there were a total of 16 schools for girls, with 15 state schools and 1 private school, and a total of 25 high schools for boys, with 18 state and 7 private schools (Yücel, 2016). The period when innovative works were particular intense in the *Dârülmuallimât*s and Girls' Fine Arts Schools corresponds to the Second Constitutional Period, when the state also provided educational opportunities abroad for female students.

Abdülhamid II also consulted on the establishment of the *Sanayi-i Nefise Mektebi* (1882), the first fine arts education institution, and appointed Osman Hamdi Bey as the principal of that school (Soylu, 2019). Osman Hamdi Bey had mentioned the Ottoman Empire's lack of an institution providing art education and the necessity for such an institution, and in 1881 he obtained the permission of Abdülhamid II and the Ministry of Commerce to start the construction of the *Sanayi-i Nefise Mektebi* in 1882, right across from the Archeology Museum, of which he was the director (Dilmaç, 2011). The first art school established did not accept female students. This may be due to the belief held for centuries that it was a sin to be engaged in painting and sculpture (Dilmaç, 2011) and, moreover, the possibility that women's engagement with art would be criticized by society. However, in those years when every institution was struggling under the difficult conditions of the period, Abdülhamid II gave importance to the expansion of girls' education for the development of the state.

Although the Ottoman intellectuals who grew up during the reign of Abdülhamid II defended different worldviews under headings of Westernism, Islamism, and Turkism, they shared the view that Ottoman women should receive a good education (Tunç, 2018). Considering the conditions and norms of those years, the İnas Sanayi-i



In the fifth article of the regulation establishing the school, it was stated that besides practical training, the students would be taught courses on menâzır (perspective), the history of *sınâât-ı nefîse* (fine arts), and teşrih (anatomy).
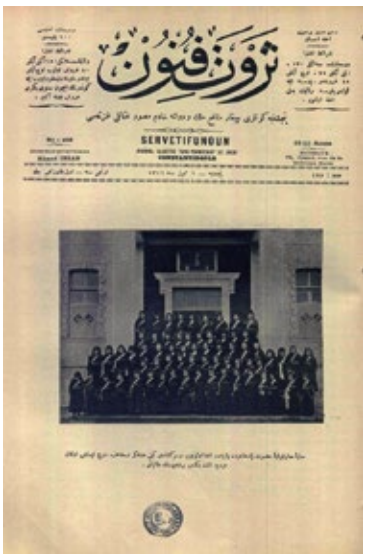
Nefise Mektebi was established in 1914 with the aim of training art teachers for girls' schools and Ottoman women were given the opportunity to receive education in an institution providing fine arts education at the academy level, 54 years after the first female student was accepted into the Royal Academy of Arts and 17 years after the first female student was accepted into the École des Beaux-Arts. Mihri Müşfik Hanım, who focused on contemporary painting and was the first female Turkish artist to teach painting at a *Dârülmuallimât* in 1913, undertook a selfless role in the establishment of the İnas Sanayi-i Nefise Mektebi on October 13, 1914, as an academy providing fine arts education to girls in the Zeynep Hanım Konağı building in Beyazıt, which was in use at that time as the building of the *Darülfünun*. She gave importance to the ability of girls to receive arts education within the arts environment of that period with her identity as a teacher and an artist, exerting great efforts in that direction.

In the fifth article of the regulation establishing the school, it was stated that besides practical training, the students would be taught courses on *menâzır* (perspective), the history of *sınâât-ı nefîse* (fine arts), and *teşrih* (anatomy). Students learned the mathematics, geometry, and technical information that prospective painters should know in

lessons on perspective, and information on the arts of the Chaldean, Assyrian, Egyptian, Greek, Roman, Byzantine, Arab, Seljuk, and Ottoman periods and the Renaissance period of European states was provided in fine arts history lessons. In anatomy lessons, human limbs were introduced in detail and points to be considered in drawing the human figure were taught (Ürekli, 2003). Moreover, some days of the week, the students visited palaces and museums with their teachers. The "Girls' Workshop" painting by Ömer Adil, who served as the director of the İnas Sanayi-i Nefise Mektebi after Mihri Hanım, is a valuable record in terms of portraying the school's working environment. In the school's second year, a sculpture workshop was opened, and İhsan Bey, a sculptor and graduate of the *Sanayi-i Nefise Mektebi*, was appointed there. Drawings based on live models were subject to limitations for a long time, and torsos brought from the Archaeological Museum were used from time to time.

Although it was stated in the first article of the regulation establishing the İnas Sanayi-i Nefise Mektebi that it was established with the aim of training art teachers for girls' schools, this institution further represents a very important step in terms of the artistic identities of Ottoman women. In the second article of the regulation, it was emphasized that education at the school would be free of charge and students would only have to procure tools and equipment. It should be underlined that this article aimed to expand the opportunity to receive art education not only to women from upper-class urban families but also to women who grew up in rural areas. Besides this free education, the students who enrolled in the school also received private Western-style education in family mansions or received education in foreign schools, especially in French schools (Tunç, 2018). This situation was important in terms of raising and encouraging successful women who could set an example for young girls in the field of fine arts, even if it highlights the divisions of social life in those years. The İnas Sanayi-i Nefise Mektebi helped train important artists such as Sait Arel (1897-1986), Muide Esat, Belkıs Mustafa Hanım (1896-1925), Nazire Osman, Güzin Duran (1898-1981), and Nazlı Ecevit (1900-1985) and contributed to the formation of the arts environment (Ürekli, 2003). "During the Republic period, education for male and female students in separate buildings was terminated, and it was thought that continuing education under a single roof would be more beneficial" (Ürekli, 2003). The İnas Sanayi-i Nefise Mektebi thus played a historical role in paving the way for Turkish women's struggles to claim space in the field of art.

Abdülhamid II attached great importance to the education of women. During his reign, Girls' High Schools were opened in many cities.



"Students of the Hamidiye Girls' Fine Arts School, whose official opening ceremony was held with the approval of the Sultan and was included in our issue last week."



"The high school where the official opening ceremony will be held for educational purposes and with the approval of the Sultan."

[1] Van Gogh Alive - The Experience, Museum. Functions of Art (2021, 22 May). Accessed from: https://www.vangoghgenova.it/what-are-the-functions-of-art.html.

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Maarif Dictionary

Eyyup BOSTANCI



Hilye İcazetname



İcazetname

This term, which was created by combining the words "*icazet*," derived from the "*cevaz*" stem, with the if'alet pattern, meaning to permit, allow, and approve in Arabic, and "*name*," meaning letter or document in Persian, refers to the document used by teachers in the past that included the books used and courses taught to their students. With an *icazetname*, the scientific knowledge, level of education, proficiency level in the field of science, and the extent of the talents of a person were understood. Of course, it was extremely important to know which teacher had issued the icazetname.

Today, this term has been replaced by the French word diplôme, referring to all kinds of official documents, certificates, and licenses. This French word was borrowed from the ancient Greek for "folded thing, especially parchment; folded document, file, certificate." It is derived from the ancient Greek verb diplóō, meaning "to fold," with the suffix +ma. This is why diplomas are usually two pages today. Let's also not forget that the word "diplomat" is also derived from diploma. The French word is derived from *diplomaticus* in New Latin, meaning "holder of official documents" or "holder of a charter or ratification." It also means "a person who holds a diploma, has a document, and is appointed." "Diplomacy," derived from "diploma," is also used to mean "document-based international relations and concessions."

Agraphia

Let's say that you want to write something or put what you are thinking into writing, but you realize that you can't do so. What you want to write is on your mind but you cannot write it on paper. Alas, the situation is quite dangerous... You cannot write because of a state of excitement or a disorder in your nervous system. In other words, you have agraphia. You are faced with the loss of writing. This word is derived by adding the negative prefix a to the Greek word *graphos* to mean "without letters," or the inability to write.

Agraphia is a neurological disorder that occurs later in life. It prevents the person from communicating in writing and spelling words. It is thought that there are many reasons for this condition. However, scientists have not been able to pinpoint the exact source of it. This disorder affects many brain functions as well as the ability to write. As is known, writing is not just a motor movement. It is the shared result of many functions such as thinking, seeing, and visual and spatial calculations. This makes it very difficult to find the cause of agraphia.





Atlas

In Greek mythology, Atlas is the strongest of the thirteen children of Iapetus and Clymene. Atlas sides with the Titans in the war declared by Zeus against his father. Atlas, commanding the Titans during the war, attracts the attention of Zeus. Zeus, who manages to defeat the Titans with the help of the Cyclops and Hekatonkheires imprisoned by the father of Atlas in Tartarus, imprisons all the Titans in Tartarus, the deepest place of the underworld. However, he considers another punishment for Atlas. He punishes Atlas to eternally carry the sky above the ground. With this punishment, Atlas would stand at the westernmost tip of the world (probably in the Atlas Mountains in Northwest Africa) and carry the sky on his shoulders, never letting it fall from his back for a moment.

This situation in mythology has inspired many other fields. Based on this mythological basis, the first vertebra bearing the skull was named "atlas" in medicine, for example.

In geography, "Atlantic" means "Sea of Atlas" and Atlantis means "Island of Atlas."

Humankind has also seen this situation as a source of inspiration for geographical knowledge, and the word "atlas," which we use to mean a compilation of geographical maps brought together to provide collective information, derives from the character of Atlas in mythology. In fact, Atlas carrying the sky on his shoulders is often depicted as Atlas carrying the globe, with the sky and the world being mistaken for each other. Even that mistake, however, has become geography material for us.

İspekter

During education and training processes, there are officers assigned to examine whether the education policies of the Ministry of Education are being implemented in accordance with the laws and regulations. You all know what this position is called. There is even a bit of panic in this knowledge of yours. Yes, we are talking about "inspectors." In the first years of the Republic, the word ispekter was used instead of inspector, with a small change in sound from the English word "inspector," since "inspector" was more difficult to pronounce in Turkish. It is interesting to wonder whether the famous Turkish novelist Reşat Nuri Güntekin was called "ispekter."



It is interesting to wonder whether the famous Turkish novelist Reşat Nuri Güntekin was called "ispekter."

Tekemmül Lessons

The in-service training activities given today to improve the pedagogical knowledge and attitudes of teachers were called *tekemmül* lessons in the Ottoman period. *Tekemmül* is derived from the Arabic stem of kemâl, which means "maturity." This word, which is formed in the pattern of *tefeül*, also means "reaching perfection" or "maturation." This shows that there have been activities to increase the quality of teachers since Ottoman times.



MOVIES TO WATCH WITH YOUR CHILDREN DURING SUMMER VACATION

Aside from entertainment purposes, watching movies is a very useful activity to develop your children's imagination. There are some movies that can change your perspective on life without you even realizing it. Movies watched in childhood leave unforgettable traces for life. Watching movies with your children is one of the best ways to have a good time with them during long holiday periods. We have listed the following movies that touch emotions and remind viewers of common values for you to watch as a family this summer vacation.

Minşa Gülter

1

LIKE STARS ON EARTH
(Taare Zameen Par)

Director: Amir Khan

Cast: Aamir Khan, Darsheel Safary, Tisca Chopra, Vipin Sharma

Country: India

Genre: Family, Drama

IMDB: 8.4



Stars on Earth tells the story of a different, troubled boy and a teacher who changes his life by entering his world. Eight-year-old Ishaan Awasthi is an underappreciated boy. He has bad grades at school and frequently fights with his friends. Ishaan, ostracized by his friends, teachers, and family, is sent to a boarding school by his family to be disciplined. The situation does not change much there, either, until he gets to know his art teacher, Ram Shankar. Realizing that Ishaan is a very unhappy and lonely child, Ram begins to investigate why. Realizing that he is actually a very special child, the teacher helps Ishaan to find himself with patience and care.



2

MY LIFE AS A ZUCCHINI
(Ma vie de Courgette)

Director: Claude Barras

Cast: Gaspard Schlatter, Sixtine Murat, Paulin Jaccoud, Michel Vuillermoz, Raul Ribera

Country: France, Switzerland

Genre: Animation, Family, Drama

IMDB: 7.8



My Life as a Zucchini is the first feature-length animated movie of Claude Barras. This Swiss-French co-production is based on the novel of French writer Gilles Paris entitled *Autobiographie d'une Courgette* (2002). Children, who are the main characters of this movie, carry the traces of their past traumas and sufferings on their faces or bodies. Negative parental behaviors, the reality of "lonely children," peer bullying, and the experiences of children who have been subjected to physical and mental violence are emotionally conveyed to the audience without resorting to unnecessary agitation. Despite the gravity of the theme, *My Life as a Zucchini* is a hopeful movie. It manages to create a story that will warm your heart with the children finding friendship and love and adults who hear their voices. You will be faced with more questions than you can answer after watching this animated movie. A difficult but useful challenge for adults...



3

BİLAL: A NEW BREED OF HERO

Director: Ayman Jamal, Khurram H. Alavi

Cast: Adewale Akinnuoye-Agbaje, China Anne McClain, Ian McShane

Country: UAE

Genre: Animation, Action, Adventure

IMDB: 7,9

Completed in 3 years with a 30 million dollar budget by Barajoun, one of the most powerful production companies in the world, and a giant Hollywood animation team of 250 people from Walt Disney and Pixar, Bilal: A New Breed of Hero focuses on the childhood years of the first muezzin of Islam, Bilal ibn Rabah. Bilal ibn Rabah's struggle for freedom and belief, which starts in his childhood and lasts a lifetime, is conveyed to the audience with a magnificent story and technique. The biggest dream of this little boy living in Abyssinia is to become the most powerful emperor in the world. These dreams are replaced by fear when Bilal and his sister are kidnapped by slave traders. Forced to live in a world where greed and injustice prevail, Bilal refuses to submit as time passes. Deciding to raise his voice against the unjust, Bilal finds the way to freedom when he encounters Islam. The movie, which is recommended by the Directorate of Religious Affairs and the Ministry of National Education of Turkey, manages to explain how Bilal earns his place in history as we know it with great struggle and determination, without distancing from reality.



4

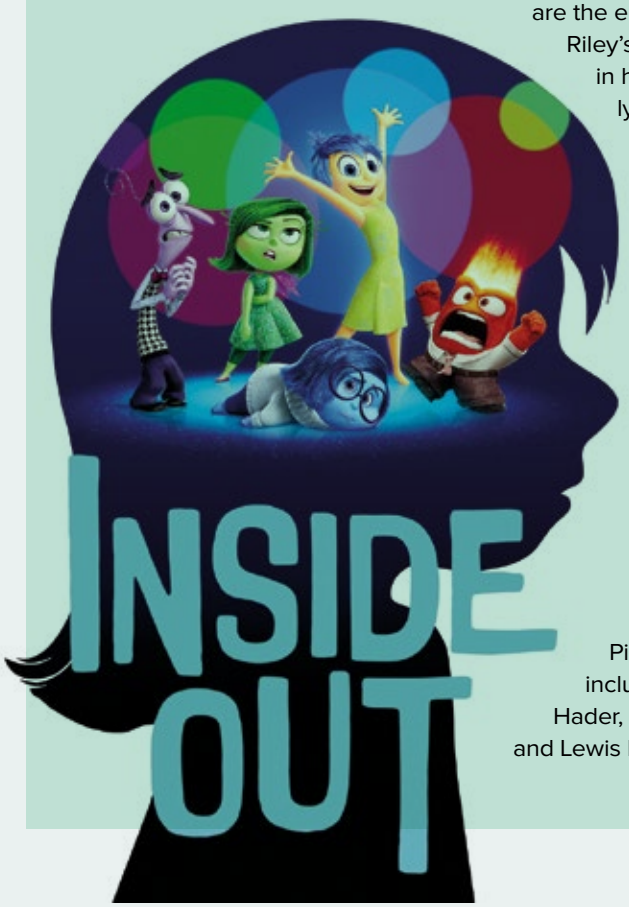
AKEELAH AND THE BEE
Director: Doug Atchisoni
Cast: Laurence Fishburne, Angela Bassett, Brittany Curran, Keke Palmer, Lee Thompson Young
Country: USA
Genre: Drama, Family
IMDB: 8,4

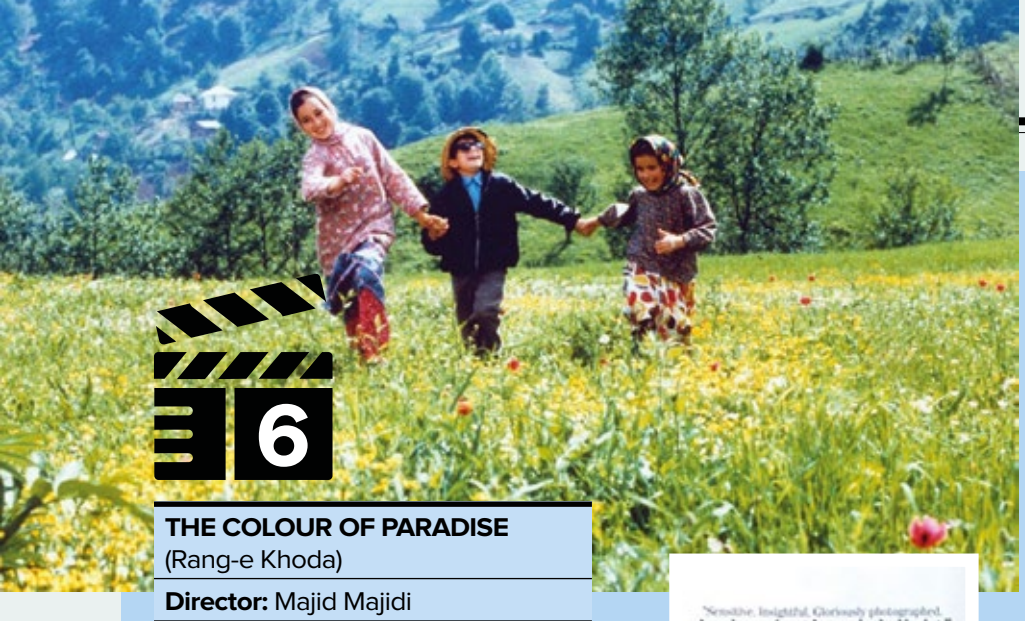
This is the success story of a shy student who is talented but lacks self-confidence. The little girl, whose name is Akeelah, is deprived of a family environment that can adequately support her success in school. She loses her father at a young age. Her mother, who struggles to make ends meet with more than one child, cannot take care of Akeelah well enough. Akeelah is failing most of her classes but is incredibly talented at grammar. The principal of the school, who is in financial trouble, wants to benefit from this student's ability. The principal hopes that if the school is represented and successful in a national competition, it will enjoy a major profit. The school principal allocates a budget for this and a tutor is hired for Akeelah. But Akeelah is very afraid of public humiliation and also lacks manners, to the dismay of her tutor. She does not want to participate in the competition at first, but then winning this competition becomes the most important thing for her. A long process then awaits her, in which she will understand that there are more valuable things than winning the competition.

5

INSIDE OUT
Director: Pete Docter, Ronnie Del Carmen
Cast: Amy Poehler, Bill Hader, Lewis Black, Mindy Kaling
Country: USA
Genre: Family, Animation, Comedy
IMDB: 8.1

Inside Out tells the story of a young child. Life changes for young Riley when her father starts a new job in San Francisco. A new home, school, and friends await Riley, who has left her life in the Midwest behind her. But what do her inner feelings tell her about this situation? Joy (Amy Poehler), Fear (Bill Hader), Anger (Lewis Black), Disgust (Mindy Kaling), and Sadness (Phyllis Smith)... These are the emotions that live inside Riley's mind, giving her advice in her daily life. Her constantly conflicting feelings will cause some chaos as she gets used to her new life. Joy is Riley's most important emotion and it always tries to keep her positive, but the other emotions are a little confused about adjusting to this new life... Michael Arndt is the screenwriter of this entertaining animation, originally conceived and directed by Pete Docter. Co-produced by Disney and and Pixar, the original voice cast includes Amy Poehler, Bill Hader, Mindy Kaling, Phyllis Smith, and Lewis Black.





6

THE COLOUR OF PARADISE
(Rang-e Khoda)

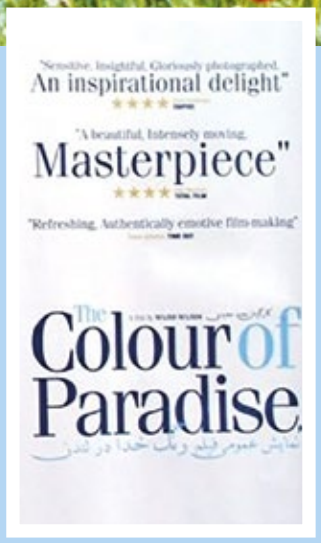
Director: Majid Majidi

Cast: Farahnaz Safari, Hossein Mahjoub, Mohsen Ramezani, Salameh Feyzi

Country: Iran

Genre: Drama

IMDB: 8.2



Mohammed is a blind boy who is a enrolled at a boarding school for the blind in Tehran. When summer vacation comes, it is time for Mohammed to leave his school and go to his village with his father on holiday. However, his father is ashamed of his blind son. Mohammed's mother has died and his father is planning a new marriage. Worried that his disabled son will ruin his marriage plans, the father seeks ways to escape his responsibility. Mohammed, on the other hand, wants to spend the summer with his two cheerful sisters and grandmother. But his father takes Mohammed away from his home, leaving him with a carpenter. Mohammed is deeply disappointed.

However, he is a very intelligent boy. His teacher at school says that Allah loves him this way, that He is supreme and everywhere. Therefore, Mohammad is not only a hardworking student, but he also believes that he will one day find Allah by touching everything with his fingers. In this way, his senses are quite developed. Things do not go as he expects because his selfish father pushes his beautiful son away from him. This movie tells the adventure of a blind child in search of Allah in a touching language, using symbols successfully, and leaves deep traces that will not be erased for a long time.

7

RAFADAN TAYFA 2 -GÖBEKLİTEPE

Director: İsmail Fidan

Cast: Şirin Giobbi, Levent Kol, Yağmur Sergen

Country: Turkey

Genre: Family, Animation, Adventure, Comedy

IMDB: 5.8



Rafadan Tayfa Göbeklitepe, the sequel to *Rafadan Tayfa Dehliz Macerası*, which debuted in theaters in 2018 and was watched by a total of 1.8 million viewers, carries the adventures of the *Rafadan Tayfa* crew to the historical site of Göbeklitepe.

The discovery of Göbeklitepe and the subsequent excavations cause great excitement all over the world. Akın receives a mysterious package from his friend Veysi from Şanlıurfa during these days when all eyes are turned toward Göbeklitepe. Akın cannot make sense of the copper tray in the package and a phone call from Veysi further complicates the situation. When Veysi, in a panic, says that someone is after him, the phone is cut off. It does not take long for the crew to realize that the tray, decorated with interesting motifs, is related to Göbeklitepe. The discoverer of Göbeklitepe, Başkan Amca, is a close friend of Kuşçu Baba. Together, the children embark on a journey from İstanbul to Şanlıurfa, both to show the copper tray to Başkan Amca and to find Veysi. As Halley's Comet passes by our world, the children are unaware that their journey will turn into a fantastic adventure. And they have an uninvited guest, Patron Kazım Amca...

8

SOUL

Director: Pete Docter

Cast: Jamie Foxx, Tina Fey, Ahmir-Khalib Thompson, Phylicia Rashād

Country: USA

Genre: Animation, Music, Fantasy

IMDB: 8.1

This film bears the signature of Pete Docter, the Oscar-winning director of other exquisite animations such as Up and *Inside Out*. Soul is a movie that comes from the world of Pixar and makes us cry and laugh from time to time, just like *Coco*. In addition to the beauty of the story, we have here a production that deserves appreciation for its realism.



As for the plot of the movie... Voiced by Jamie Foxx, Joe is a musician who teaches in middle school. He is one of those people who wanted to earn a living only by making music, mainly by playing piano, but he couldn't get the positive reactions that he wanted. At the beginning of the movie, Joe is offered a permanent teaching position at the school where he works part-time. Wandering the streets of New York, Joe suddenly finds himself falling into the sewer in the middle of the street. Little does he know that this is a gateway to another world, and now he must figure out how to get back to earth.





9

TOGO

Director: Ericson Core

Cast: Willem Dafoe, Julianne Nicholson, Christopher Heyerdahl

Country: USA

Genre: Biography, Drama, Adventure

IMDB: 8.1





Based on a true event, Togo tells the story of a man who embarks on a difficult journey to cure an epidemic that has affected his town, and his dog, Togo, who struggles for leadership.

A deadly epidemic affects the town of Nome, Alaska. In order to save the people and children living there from death, the antitoxin serum, which is the only cure, must be brought from another town 970 kilometers away. However, as is always the case in life, there are obstacles to be overcome in order to achieve something in this story. These obstacles are cold weather conditions, with temperatures falling to -70 °C, and snow storms. The townspeople enlist the help of a dog trainer named Leonhard Seppala for this task. Agreeing to help, Leonhard Seppala sets off with his dogs, led by Togo, a frail-looking old Siberian Husky. Journeying to the town where the serum is located, Seppala and Togo will put up an incredible fight along the way.



Centering on the communication between animals and humans, this Walt Disney production is one of the most impactful and emotional films that you can watch with your children in order to help them understand the love for animals.

10

THE BOY WHO HARNESSED THE WIND

Director: Chiwetel Ejiofor

Cast: Maxwell Simba, Chiwetel Ejiofor, Aïssa Maïga

Country: Malawi, England

Genre: Drama

IMDB: 7.3



This movie tells the story of a 13-year-old boy who is expelled from school due to financial difficulties. William Kamkwamba is a 13-year-old boy living in Malawi. A smart boy, he is expelled from his beloved school because of the financial difficulties of his family. But that doesn't stop William from studying. He starts going to the school library at night without anyone knowing. William, who is especially interested in physics and electricity, achieves great success by studying in the library for days in secret from the school administration. With what he's learned, William builds a wind generator using parts of his father's old bicycle. This success will not only change his life and his family's; it will also save the village from drought and misery.

Chiwetel Ejiofor is the director of the film, which is based on the bestselling book of the same name by William Kamkwamba and Bryan Mealer. The movie also contains important messages in terms of drawing attention to the losses caused by inequality of opportunity in education in African countries. Despite everything, the story of William, who continues to learn without hesitation, is the kind of story that can help us find the strength that is hidden somewhere inside us.

Our Yunus:
Come, Let's Get Acquainted

"Do not be afraid of dying, lovers never die.
Dying is nothing to you since your soul is divine."

The 700th anniversary of Yunus Emre's death has been included in the commemoration and celebration anniversaries to be held by UNESCO. Accordingly, 2021 was declared as the year of Yunus Emre and the Turkish language by the Presidency of the Republic of Turkey with the mottos of "Our Yunus" and "Turkish, a World Language." Starting from these points, it is necessary to focus on the essence of the issue in every sense in order to remember the "our" part of "our Yunus" and to make Turkish a tool for the world to adopt.

Furkan Güleç

Due to the survival of insufficient documents, Yunus Emre's historical identity can only be discerned from among legends. The most extensive information about the epic life of Yunus Emre is recorded in Ferdowsi's *Velayetname-i Hacı Bektaş-ı Velî* and in the work entitled *Tezkire* by İbrahim Hâs, a Turkish biographer of the 18th century. In summary, Yunus finds himself in the presence of Hacı Bektaş-ı Veli to ask for help when a famine breaks out. He demands wheat in return for the fruits that he brings as a gift. Hacı Bektaş offers him breath (or a poem) instead of wheat, but Yunus rejects that offer, mentioning his children. For each individual piece of fruit that he has brought, the offer is repeated, first for two and then ten breaths. Each time, Yunus rejects the offers and repeats his demand for wheat. In the end, he gets what he wants and he leaves. Along the way, however, he comes to his senses, understands what he has rejected, regrets his actions, and returns to the presence of Hacı Bektaş to ask for his share. He is then told: "You have lost your chance. We have given the key of that lock to Tapduk Emre; go take your share from him."

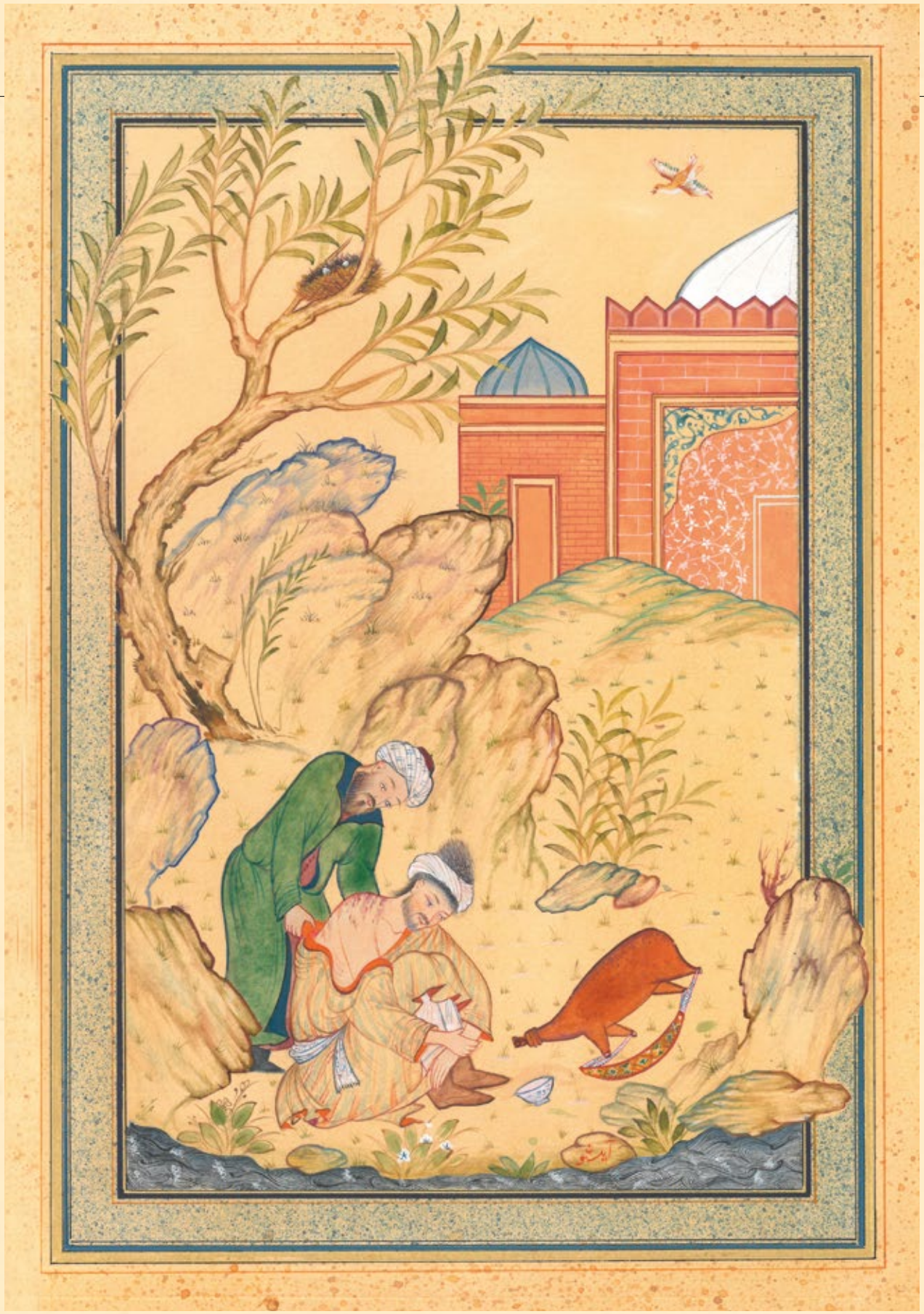


Yunus then joins Tapduk Emre. He performs the services asked of him; he carries wood to the dervish lodge (*dergah*) for thirty years, and he never carries a bent piece of wood through the door of the *dergah*, not even once. When asked the reason for this, he replies that *"One who is not right is not worthy of this door."* Thinking that he could not complete the necessary spiritual stages after thirty years of service, he leaves the *dergah*. Due to seven soldiers that he encounters on the way and the extraordinary situations that he experiences with them, he realizes the wrongness of his thinking and returns again to the *dergah*.

OUR YUNUS

In the narrations compiled by Aziz Mahmud Hüdâyî in *Vâkıât*, the expression "Our Yunus," inherited by us today, is used as follows:

Yunus immediately returns and asks for the help of Ana Bacı, the wife of Tapduk Emre. He says to her, "Please, help me so that he will forgive me!" Ana Bacı says: "Tapduk performs an ablution for the morning prayer. You lie on the doorstep. When he steps on you, he will ask 'Who is this?' Then I will say 'Yunus!' If he says, 'Which Yunus?' then you will know that you are out of his



Yunus's back is bruised from carrying water to the dergah in a leather bottle, and he shows this to the dervish Abakay. Abakay tells Tapduk Emre about the situation. Tapduk Emre resents that Yunus has shown his bruises to someone else and dismisses him.

Miniature:
Aysun Mirzeoğlu

Among digitalized inscriptions shared online by the Vatican, a new body of work by the great Turkish thinker, Sufi, and folk poet Yunus Emre has emerged, with nearly 200 poems that have never been revealed before.





heart. If he says, 'Our Yunus?' you will grovel and ask for forgiveness." Yunus lies on the doorstep as Ana Bacı has said. Tapduk Emre could not see. That is why Ana Bacı would take his arm and escort him to perform the ablution. That morning, his feet touch Yunus as he walks. He asks "Who is this?" Ana Bacı says "Yunus." When Tapduk says "Our Yunus?", Yunus grovels and begs for forgiveness, and then Tapduk forgives him.

A QUESTION WITH A DIFFICULT ANSWER

His life story, consisting of the narrations briefly offered above, gives us a simple message about the personality of Yunus Emre. It is a very clear message that everyone should think about, in the sense of *"actions speaking louder than words,"* as he seeks rightness as a basis even in the wood that he carries, and he is sensitive to not introducing deviation into his life even though he is surrounded by it. With this reflection, we stand at the beginning of a series of moral questions that need to be answered by everyone in terms of how they sustain their lives, no matter how poor or rich they may be.

WHO ARE "WE"?

Will we be able to introduce the essence of "Our Yunus," which makes us who we are, with the clean and pure Turkish that he used, or will the Turkish language be able to survive in such a world? For the correct answer to these questions, don't we need to first and foremost remember who we are? Let us look at how Yunus praised knowing yourself:

"What is better than a person knowing himself?
The person who knows himself is surely clean in the eyes of the public."

THE LANGUAGE OF YUNUS

"The essence of this body is fire, water, earth, and wind;
Each one returns to its origin; what is it with you being unaware?"

What is your essence? Is it the flesh that mixes with four elements, or is it the soul that remains when the external is removed? Yunus states the mortality of the body as follows:

"The flesh is mortal, the soul does not die, and those who leave do not come back;
If something has to die, it is the flesh, not the soul."

We gave the object, our skin, to the fire, water, earth, and wind. We were not different than animals and plants. We have only our soul left, which cannot die. Thus, our own essence is the essence that protects us from death, in contrast to a flower or an insect. But where did this soul come from? On whose loom was it woven? Why can it not die?

"Do not be afraid of dying, lovers never die. Dying is nothing to you since your soul is divine."

The essence that we search for is divine. Therefore, everyone who possesses life contains this divine essence within themselves. Those who cannot find this essence look at those that have achieved awareness of it with jealousy, or with the evil eye:

"Do not look down on anyone, everyone has value;
Seeing shortcomings is not for the saints."
"We read and we resort to Allah,
We appreciate the created because of the Creator."

Now, if there are any deficiencies, they do not lie in the person who is being looked down upon; they lie in the beholder. Although the beholder cannot see it, that person being looked down upon is in harmony with Allah, carrying a divine essence. When this harmony is known from the narrowest circle to the widest circle, nothing remains in the universe that is not related to each other:

"Saints did not make this mistake, they continued on their path.
For those who love Hakk [Allah], everyone is their brother or sister."

Have we remembered who we are? Have we understood our essence? Even if so, have we found the source of this essence? Even if we have found it, have we seen it in the created? This way of looking makes us who we are.









Let us assume that we have understood our own essence and, with the expression of Yunus, have become "clean in the eyes of the public." But does the world not need this awareness? Doesn't the person who is overwhelmed by the grip of modernism desire to feel unique? Or rather, let's express the question as follows: Is there dissimilarity between the social crises of the time in which Yunus lived and today? Not at all! The world, with its various separations, conflicts, wars, migrations, and material/spiritual crises, needs more than ever to find its essence, to follow the traces of metaphysics, and to make sense of the art it observes without deviating from the path of denial of its artist.

"The whole universe is unity, and Adam [Human] is the one who knows this.
Whoever denies that unity is the enemy of his own essence."

Hasn't the world that we live in raised generations that self-destruct and take their own lives? In that case, is it not necessary to try to convey the fruit of this tree, the wisdom of this tree that emerged from Turkistan and gave its fruits on Anatolian soil, to the entire world like a sapling that will grow in the soil of every continent?

WHERE SHOULD WE START?

"Come, let's get acquainted, let's make things easier.
Let's love, let's be loved, the [fleeting] world will not be left to anyone."

The mutual acquaintance that will allow for a "we" without the separation of "you" and "me" starts with a greeting, which is the easiest thing. Man is the enemy of what he does not know, but he gets acquainted, and then he knows and loves. This love starts from people and goes to Allah. The other direction – which is the way of Yunus – descends from Allah to the people. From this point of view, "those who do not look at the seventy-two nations of the world in unity ... are in fact rebels."

"I didn't come here to defend a cause; my task is to love.
The Friend's house is the heart; I came to win hearts."

The attitude of Yunus is not an attitude of building a guesthouse in the world, which is just one destination during the journey to the real homeland, but rather of making efforts to build up and save hearts with love.

"The person who came to this world must leave again.
He is a guest in this land and will leave one day."

This point involves building a language (of both the tongue and mind) that will yield lasting results in the mortal world. Yunus advises that those who aspire to do so be tolerant, as always:

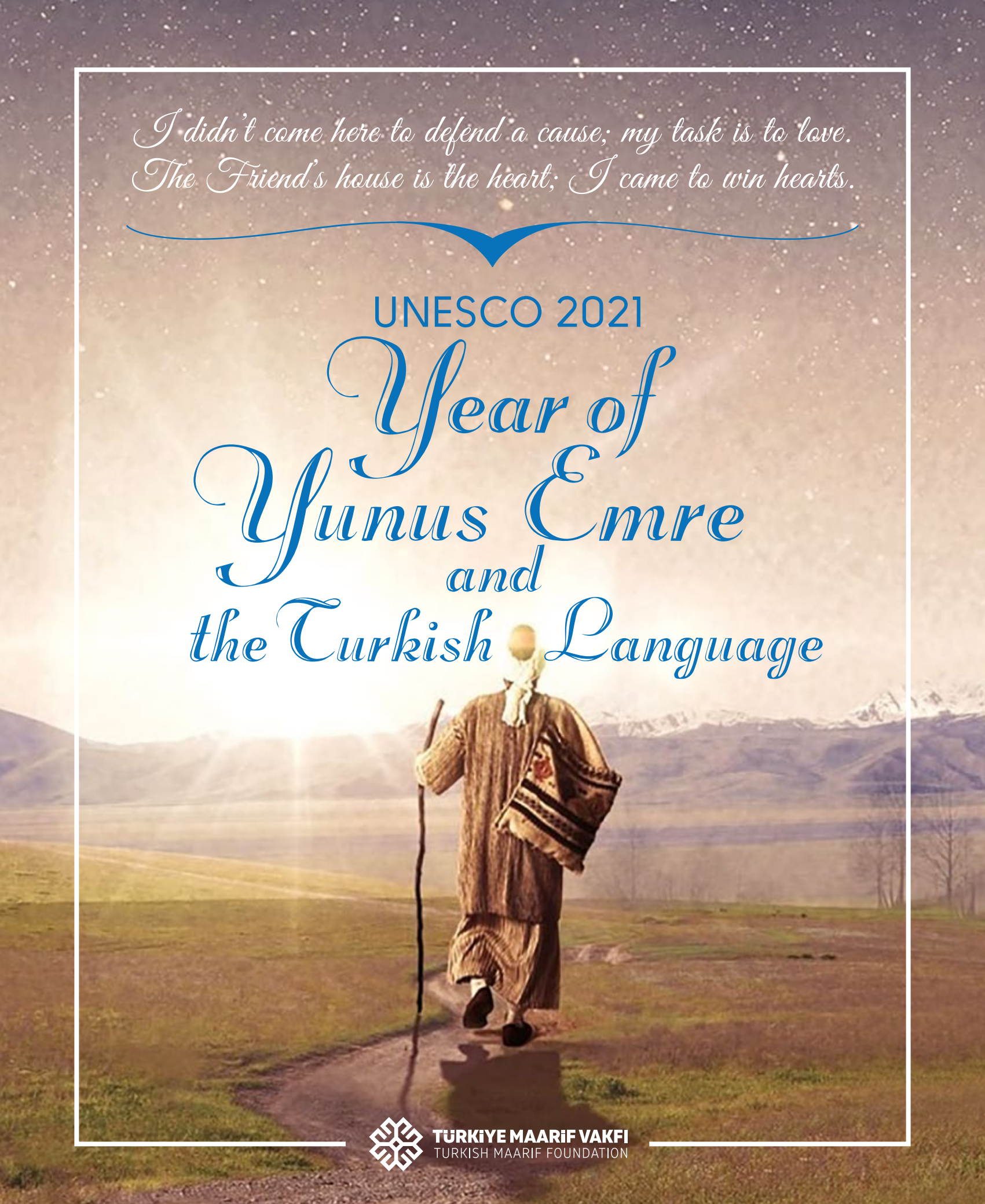
"Accept the voyage, and one day you will reach the ocean."

If so, let Yunus be our companion...
"My Yunus Emre stops and gives advice to the saints.
He is a companion on the road with others who aspire to be saints,
not with those strayed from the path."

I didn't come here to defend a cause; my task is to love.
The Friend's house is the heart; I came to win hearts.

UNESCO 2021

Year of Yunus Emre and the Turkish Language



TÜRKİYE MAARİF VAKFI
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YÜKSELİYORUZ.

DÜNYANIN LOJİSTİK MERKEZİ İSTANBUL'DA BULUNAN YENİ EVİMİZ SMARTIST İLE
ŞİMDİ ÇOK DAHA BÜYÜK VE TEKNOLOJİK BİR TESİSE SAHİBİZ.
BUNUNLA BİRLİKTE ÇEVREYE DUYARLI VE MÜŞTERİ ODAKLI OLMAYA DEVAM EDİYOR,
DÜNYANIN EN BÜYÜK HAVA KARGO MARKASI OLMA HEDEFİMİZE DOĞRU
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