MAARIF INTERVIEWS
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The Thinker Who Rewrote the History of Science

ANALYSIS
The New Paradigm in Education: Intellectual Humility
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

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.
In the fifth issue of the International Maarif Journal, the subject of Education for Sustainable Development is evaluated from different perspectives by academics and expert authors.

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*Year: 2, Issue: 5, 2021*

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**MAARIF INTERVIEWS**

Prof. Dr. Nazif Gürdoğan

“Development in Any Field Is Not Possible in Societies That Do Not Adopt the Principle of Competing in Goodness.”

As Rumi and Yunus said, we have to be reborn every day. We have to be prepared for a world that is changing every day. The driving force of the new era is quality, not neighborhoods. Quality does not carry a passport *P. 20*

**PRESENTATION**

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PORTRAIT
Prof. Dr. Mehmet Fuat Sezgin

The Thinker Who Rewrote the History of Science
Fuat Sezgin was, in the literal sense of the words, “a wise man.” He dedicated his life to resurrecting a memory that had sunk into oblivion, to transferring the accumulated civilization that had been forgotten for centuries to new generations, and to creating works that would require rewriting the world’s history of science. P. 88

COUNTRIES AND CULTURES
Mali: The Mysterious Lands of West Africa
The land of Mali hosted a rich and powerful empire in the 13th and 14th centuries and experienced the most brilliant period of its history. The name of the country was inspired by the historic Mali Empire that ruled in these lands and the Mandinka people who lived in the empire. P. 70

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INTERVIEW
Prof. Dr. Haluk Görgün

Three Words Describing ASELSAN: “Science, Education, and Dedication”
The underlying reason of the success of an institution like ASELSAN, which is making a mark in the world each passing day, is undoubtedly a planning vision that prioritizes sustainability and the potential of qualified people. P. 82

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Humankind has no action in this world that is not somehow related to education. We are in a continuous process of education and learning from the day we are born, and even from the time we are in our mothers’ wombs. Education gives us the key to interpret the world we live in and to prepare for a healthy future together with the environment in which we live. Hence, in all aspects of life, we have to ensure that our people benefit from educational opportunities in high-quality and appropriate conditions in order to enrich our lives, regulate our social relations, and gain a sense of responsibility towards nature, humanity, and our society.

In every issue of our journal, we explore phenomena that concern the whole of humanity and cases that seek answers to the problems of our time from the perspective of education. This is because we believe that the solutions to the problems of our planet and humanity can be found through education. With that understanding in mind, we present the dossier we prepared with the title of “Education for Sustainable Development” in this issue of our journal to the attention of our readers and the academic world.

The concept of sustainable development was first defined in the Brundtland Report, prepared by the World Commission on Environment and Development (WCED) in 1987, as follows: “Meeting the needs of the present without compromising the ability of future generations to meet their own needs.”

How can the “sustainability” described here be achieved? It is first and foremost possible to achieve this target by building a moral and responsible consciousness towards the universe and life. We can leave a sustainable environment and future to those who will come after us with the efficient use of our resources, the observation of intergenerational justice, equal and fair sharing, and the establishment of a needs-based balance in production and consumption. To this end, education plays an extremely critical role. A society that is built on respect for life, nature, and others and that thinks about the future as well as the present can only be established by organizing education according to the principles of sustainability as well.

It is the common desire of all countries to realize the goal of a prosperous and peaceful society that is developed in every aspect. However, in cases where development and production are the only values, and the view of nature and human beings is abstracted from moral and spiritual principles, it is inevitable that both our society and our planet will experience catastrophes, the consequences of which we face today.

With the International Maarif Journal, I believe that we have fulfilled an important responsibility by bringing such a vital issue to the pages of the journal in these days when we have seen the Paris Climate Agreement being passed by the Turkish Grand National Assembly.

I would like to thank all of the academics and authors who contributed to this issue with their articles and thoughts, and I wish a healthier and greener future for all humanity.

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

EDUCATION FOR A SUSTAINABLE FUTURE

We can leave a sustainable environment and future to those who will come after us with the efficient use of our resources, the observation of intergenerational justice, equal and fair sharing, and the establishment of a needs-based balance in production and consumption. To this end, education plays an extremely critical role.
Türkiye Scholarships for Quality Education

Abdullah Eren, President of the Presidency for Turks Abroad and Related Communities (Yurtdışı Türkler ve Akraba Topluluklar Başkanlığı: YTB), stated that the Türkiye Scholarships Program is one of the most distinguished scholarship programs in the world, saying: “Türkiye Scholarships is the scholarship program that receives applications from the largest number of countries in the world.”

Pointing out that there are international students from 55 countries in the program, Eren stated that he is pleased that students from every continent can attend the online courses and improve their Turkish to a higher level.

Within the scope of Türkiye Scholarships, preparatory Turkish education is given for one year in Turkish teaching centers of universities to students who are entitled to higher education in Turkey but do not have proficiency in the Turkish language. Through this Turkish preparatory program, 1171 international students were given online Turkish lessons in 56 Turkish teaching centers.

In order for their education to advance successfully, the students participating in this program also receive face-to-face Turkish preparatory education at Turkish teaching centers in the areas where their universities are located.

HKU students, who participated in the competition in 2020 with 43 projects, submitted 235 project applications this year with an increase of 5.5 times.

HKU students, who participated in the competition in 2020 with 43 projects, submitted 235 project applications this year with an increase of 5.5 times.

Giving a statement on this subject, HKU Rector Prof. Dr. Türkay Dereli said, “As HKU, we prioritize innovation, entrepreneurship, and technology studies without ignoring the ‘human.’ While doing this, we do not discriminate between faculties or departments. We offer an incubation center, technocity, technology transfer office, and other similar opportunities for our students to help them demonstrate their R&D capacities.

In 2021, we are ranked first among foundation universities and 12th among all universities. When the results are looked at proportionally, it is clear that HKU is leading by a great margin.”
Harvard Will Not Invest in Fossil Fuels

Harvard University President Larry Bacow said, “Given the need to decarbonize the economy and our responsibility as fiduciaries to make long-term investment decisions that support our teaching and research mission, we do not believe such investments are prudent.”

In his statement, Bacow referred to the relevant UN report and described climate change as “the most consequential threat facing humanity.”

Universities, student activists, and alumni in the United States are forcing universities to take a stand on this issue by citing the effects of climate change and they are increasing their pressure to stop investing in fossil fuels.

International Cooperation on Climate Education

*Education International, the OECD, and UNESCO have joined forces to support teacher collaboration on climate education.*

Launched on July 1 during an online event jointly organized by Education International, the OECD, and UNESCO, the Global Teaching Insights initiative is being realized as part of Education International’s Teach for the Planet campaign. The project also aims to create an online platform where teachers can connect with colleagues from around the world to share their ideas and best practices on climate education.

In her statement on the subject, Education International President Susan Hopgood emphasized the importance of climate education, stating that while 85% of youth globally believe that they have responsibilities in the fight against climate change, over 40% are unsure of how they can make a difference.

Andreas Schleicher, Director of the OECD Directorate of Education and Skills, said in his statement: “Government and school policies on climate education need to provide students with a deep understanding of environmental issues and inspire them to co-develop strategies to take action for the environment.”

**40% of Children in East and South Africa Are Not in School**

Nearly 69 million children are currently not in school due to COVID-19 and pre-pandemic factors.

UNICEF estimates that 40% of all school-aged children across East and South Africa are currently not in school due to COVID-19-induced closures and pre-pandemic levels of out-of-school children. Across the region, we are seeing re-closures of schools mid-year due to recent COVID-19 surges, with over 32 million children estimated to be out of school because of pandemic closures or having failed to return after their schools re-opened earlier this year.

Lieke van de Wiel, UNICEF Regional Director for Eastern and Southern Europe, stated that it was shocking that an estimated 40% of children in the region were out of school, even though the number of children out of school fluctuates constantly depending on local conditions, and said: “We urge all Governments to prioritize education and ensure that schools remain open and safe.” She stressed that efforts in this regard are vital for the well-being of children and also for the future of countries.

Face-to-Face Education Call by WHO and UNICEF

As millions of children return to school in Europe, where the highly contagious SARS-CoV-2 Delta variant is predominant, the WHO Regional Office for Europe and UNICEF Regional Office for Europe and Central Asia have called on schools to remain open with measures to minimize transmission of the virus.

Among the proposed measures, administering the COVID-19 vaccine to teachers and other school personnel who are part of target population groups is given top priority in national vaccination plans. It is also recommended to vaccinate children aged 12 years and older who are at higher risk of COVID-19 disease. Improving the school environment with better ventilation of classrooms, reducing class sizes if possible, paying attention to physical distance, and testing children and staff regularly are listed as other important measures.

Other measures identified by eight experts and requested by the 53 Member States in the WHO European Region are as follows:

- Schools should be among the last places to close and the first to re-open.
- Implement a testing strategy.
- Provide effective risk reduction measures.
- Protect children’s mental and social well-being.
- Improve the school environment.
- Include children and teenagers in decision-making processes.
- Implement a vaccination strategy that is designed to keep children in school.

Eight Turkish Universities on the ARWU List

ShanghaiRanking, the official publisher of the academic ranking of world universities, announced the results of the 2021 Academic Ranking of World Universities (ARWU).

More than 2000 universities were evaluated and only the best 1000 results were published, including eight universities from Turkey. İstanbul University was in the 401-500 range, followed by Dokuz Eylül University and Hacettepe University in the 701-800 range. Ankara University was in the 801-900 range and Ege, Istanbul Technical, and Middle East Technical University were in the 901-1000 range. The top three universities in ARWU-2021 were Harvard, Stanford, and Cambridge.
Disadvantaged Children in Germany Bear the Burden of School Closures

The children of immigrant families have suffered the most from the closure of schools during the pandemic period. These children even forgot German. While things are relatively back to normal with the re-opening of schools, catching up with their peers is a big challenge for disadvantaged students. Schools need more funding for the education of these children. Daniel Schröder, head of Die Arche, an NGO working in the field of education, draws attention to the magnitude of the problem and says that immigrant families are forgotten by politicians: “Voter turnout in the districts where Die Arche works is extremely low.” This results in politicians being less enthusiastic about the difficulties these families are experiencing. This is the most frightening and unfair aspect of the system, according to Schröder. “They think about voters, not the people.”

Schröder claims that many people have no idea about the difficulties poor families face in Germany. The lunches provided for some children by his association are the only real meals those children get in a day. Stating that he is disappointed because the issue of child poverty is only occasionally dealt with, Schröder says that long-term solutions are needed. Die Arche calls for a system of basic income for children, in which half of the money would go to the families and the other to the schools.


A Turkish Teacher Among the Best in the World

Altındağ Atatürk Vocational and Technical Anatolian High School teacher Selçuk Yusuf Arslan developed a project called “Girls Meeting Technology.” He received an award for that project in the Global Teacher Awards organized by Alert Knowledge Services in 2018.

In the “Green Skills Award” competition organized by the European Training Foundation this year, he was deemed worthy of recognition for his environmentally themed projects in coding education. With a project that he developed with his students that teaches about hydrogen fuel cells in an entertaining way with educational software, Arslan received both the Turkish and international first prizes in the competition “FCHgo!” and he was selected as “Teacher of the Year” in Turkey 3 times and “Innovative Educator Expert” by Microsoft.

Arslan, who is also a “teacher ambassador” of institutions such as Scientix, Science on Stage Europe, HundrED, and CERN, applied for the “2021 Global Teacher Prize” competition. After the committee’s evaluation of the “2021 Global Teacher Prize” competition organized by the Varkey Foundation, of which former US President Bill Clinton is the Honorary President, Arslan was selected among the 50 best teachers in the world.

High School Student Made PCR Device

A 12th grade student named Recep Görkem Akandere made a PCR device to be used in COVID-19 tests at home with the support of his family. It was reported that this PCR device, made by the high school student for 2000 Turkish lira, produced accurate results in comparative tests performed at his request on processed samples at Kütahya Health Sciences University. High school student Akandere, who set up a workshop in a room of his house and combined the parts he designed using a 3D printer at home, applied to Kütahya Health Sciences University to determine the accuracy of the tests. Samples that had been studied and tested before were tested with the PCR device created by the student under the supervision of two academics at the university. In the report prepared by the Dean of the Faculty of Medicine, it was stated that the device produced accurate results.

Akandere stated that the software, hardware, and design of the PCR device are all his own and that it can be produced at a very low cost compared to devices currently on the market. He further said: “My device finishes the process half an hour earlier than the other devices on the market and its temperature control sensitivity is higher. Thanks to the algorithm, we can save time. I want this device to be produced in Turkey and I want my country to be completely independent in this sector. That’s why I’m open to any support regarding the manufacturing of my device.”
A New Era in Climate Policies

The Paris Agreement aims to support the principles of sustainable development by working to improve the implementation of the United Nations Framework Convention on Climate Change.

Although the Paris Agreement was signed with 175 country representatives at the High-Level Signature Ceremony held in New York on April 22, 2016, Turkey waited until 2021 to implement the agreement. There were two main reservations behind Turkey’s decision to wait until 2021. The first regarded whether Turkey would be treated in the same way as other similar countries in terms of gaining access to financial and technological support. The second was about whether Turkey would be able to meet the expectations regarding emission reductions when criteria such as economic growth and population growth are taken into consideration.

Despite these question marks, Turkey announced that it would submit the Paris Climate Agreement to the Parliament for approval with the statement made by President Recep Tayyip Erdoğan at the 76th session of the UN General Assembly on September 21, 2021. Ankara’s implementation of the agreement despite its reservations has two main reasons. The first of these is to demonstrate that Turkey acts together with the international community in solutions for global problems. The second is to bring together solutions for global problems and national goals on the same plane in order to ensure that national and global goals are integrated. Thus, it is expected that Turkey will realize its green development movement by creating a sustainable ecosystem while reaching its 2023, 2053, and 2071 targets.

With the goals set by the Paris Climate Agreement, the protection of the natural environment is seen as a responsibility to future generations on both global and national scales. As a requirement of this responsibility, Turkey commits to reducing its emissions increase by 21% by 2030. As a requirement of that commitment, Turkey will announce the activities it has carried out and the progress it has achieved in National Contribution Statements to be prepared every five years.

THE NAME OF THE MINISTRY OF ENVIRONMENT AND URBANIZATION IS CHANGING

With the Paris Climate Agreement, Turkey brought together its responsibilities for environmental protection around an international convention and took the agreement to the General Assembly of the Grand National Assembly of Turkey. With the approval of all 353 deputies attending the General Assembly, the Draft Law on the Approval of the Paris Agreement was accepted. In the following period, Turkey is expected to take concrete steps to protect the environment and expand renewable energy.

In this context, public institutions have important responsibilities. Thus, President Recep Tayyip Erdoğan, in his statement on
October 11, 2021, announced that the name of the Republic of Turkey Ministry of Environment and Urbanization will be changed to Republic of Turkey Ministry of Environment, Urbanization, and Climate Change. Through this change, Turkey has taken an institutional step toward solving ecological problems.

REFLECTIONS ON EDUCATION
Turkey’s ratification of the Paris Agreement also makes cooperation obligatory in all sectors. The consensus of experts is that a holistic approach is important for the success of the agreement. In the short term, the energy, manufacturing, transportation, agriculture, and education sectors in Turkey need to be reorganized according to the provisions of the agreement.

Increasing and promoting sustainable school projects in the field of education and the need to address climate change and sustainability in school curricula are among the issues that are emphasized. The aim is to include the subject in a more inclusive way at all levels of education.

TURKEY RATIFIED THE PARIS AGREEMENT
The law on the Paris Agreement entered into force after being published in the Official Gazette.

PARIS AGREEMENT
- Adopted on December 12, 2015.
- Entered into force on November 4, 2016.
- Turkey signed the agreement with 175 countries on April 22, 2016.
- With ratification of the agreement, Turkey will enter a new period in which goals and policies to combat climate change will be determined.

GOALS OF THE AGREEMENT
- Reduction of global carbon emissions by 50% by 2030 and to zero by 2050.
- Limiting the rise in global temperature to 1.5 °C.

TURKEY’S GOALS WITHIN THE SCOPE OF THE PARIS AGREEMENT
Turkey made a commitment to reduce its emissions increase by 21% by 2030.

197 Countries
There are 197 signatory parties to the agreement.
Turkey is in the top five in global education

Turkish Maarif Foundation President Prof. Dr. Birol Akgün said that with the Maarif Foundation’s 377 schools and nearly 50,000 students, Turkey is among the top five countries in the world along with France, Germany, England, and China in terms of its international school network.

Turkish Maarif Foundation (TMF) President Prof. Dr. Birol Akgün evaluated the 5 years since the establishment of the TMF, which carries out comprehensive educational activities in 47 countries on 6 continents, from Asia to Africa, from North America to Europe, and from South America to Australia, and announced its projects for the new term. Explaining that they had focused on reinstating FETÖ-affiliated schools abroad to Turkey during the foundation’s initial establishment, Akgün said, “Our foundation has taken over 234 FETÖ-affiliated schools in 20 countries and our work on this issue continues.” Akgün explained that as the TMF, they met with representatives from 104 countries in 5 years and signed cooperation protocols with 89 of them that recognize the existence of the TMF. He further stated: “We have schools in 47 of these countries. We have 45,000 students who are currently being educated in these schools and this number is increasing. The number of students that graduated from our high schools is around 5,700. We have an average of 1,000 graduates a year.”

Raising Friendly Generations

Emphasizing that countries such as France and Germany are making efforts to produce new generations that are friendly and helpful to them by opening their own schools in different countries of the world, Akgün continued as follows: “In this context, the Turkish Maarif Foundation is a much needed institution that should have been established a long time ago, and perhaps its establishment was delayed in this sense. Turkey has become one of the top five countries, along with France, Germany, England, and China, in terms of its international school network in the past 5 years, with the Maarif Foundation’s newly opened schools in 25 countries, as well as the schools it took over in 20 countries, with a total of 377 schools in 44 countries and nearly 50,000 students.”
How Will Children Adapt to School After the Pandemic?

After a long pandemic period, children started face-to-face education again this school year. However, will students who have been away from face-to-face education for about a year and a half, some of whom have been enrolled in school for a very short time, return to normal conditions easily? Experts give serious warnings regarding adaptation to school.

**REDUCE THEIR ANXIETY**
- Parents must be active. They are the real force that will prepare children for school. It is necessary to inform students according to their level of education and to raise children’s awareness. Children should not be exposed to anxiety-inducing attitudes during this time.

**ANXIETY MAY BE SEEN EVEN IN THE THIRD GRADE**
- Just like first-graders in normal circumstances, second-year or third-year students who have never been to school or know very little about school may have separation anxiety. The child should not be forced to go to school alone. The family needs to go to school with the child, give the child confidence, and pick the child up on time. In other words, the family should contribute to the adaptation process.

**SCHOOL WILL DO GOOD**
Hacettepe University Department of Guidance and Psychological Counseling Lecturer and Assoc. Prof. Dr. Arif Özer says the following about the adaptation process facing children:

Yıldız Technical University’s Dean of the Faculty of Education, Prof. Dr. Mehmet Engin Deniz, lists the things that can be done during the process of students returning to school as follows:
- Students have been away from school for too long. During this time, some of them suffered disease and losses. Therefore, it would be beneficial to provide psycho-social support at school. Psychological counseling and guidance departments and teachers all need to spend extra time on the adaptation process.
- All students who will go back to school, and especially elementary school students, need to feel safe. First of all, with the right information, anxieties can be reduced to a minimum. For students to have less anxiety, they need to know that school is a safe place.

**SCREEN ADDICTION**
“In this process, it doesn’t matter if schools provide distance or face-to-face education. Families need to make an effort for their children to use the internet right. Information is constantly renewed; it is necessary to keep up with it no matter what the conditions are. For instance, I do not agree with the viewpoints that make the whole society look like it has a disorder under the label of ‘screen addiction.’ While children were at home, they were required to do that, but this situation will change when schools open. The focus will shift elsewhere.”

**MORE SLEEP TO COPE WITH LONELINESS**
The life of Generation Z, which is defined as the generation born into the digital age and represents the next generation of the workforce, was changed with the pandemic. Undoubtedly, a main aspect of this period was the prolongation of the time they spend in front of screens. Research reveals that a significant portion of Generation Z, who feel more alone in front of screens, has tried to cope with this feeling of loneliness by sleeping more.
How Can You Get Your Children to Enjoy Reading?

The love of reading is the basic condition for arousing curiosity about research, learning new things, developing comprehension and speaking skills, and building a rich vocabulary for your children.

Minşa Gülter

Spending just 10 to 15 minutes a day reading a book with your children may be enough for them to acquire the reading habit. It may be helpful for you to take a look at our suggestions that parents can easily implement in this regard.

1. INTRODUCE YOUR CHILDREN TO BOOKS AT A VERY EARLY STAGE
Reading to your child in infancy will help a great deal in preparing them in the best way for life. Babies learn language from adults who repeat words and read to them. While you are reading to your child, talk about the characters, objects, or sounds that animals make in the book. Hearing your voice will help them give meaning to the letters and pictures they see. Change the pitch and tone of your voice as you read and try different accents or voices for different characters. This will both entertain your child and help your child connect with life by moving the story beyond the pages of the book.

2. INTRODUCE YOUR CHILDREN TO READING AND PEOPLE WHO READ TO CREATE ROLE MODELS
It is important that children view reading as a fun and enjoyable activity rather than a difficult task. Get them in touch with the environment and with people involved with books so that they understand this. If your children see you reading often, it will encourage them to read, as well. This will also help increase the time spent away from screens.

3. TAKE TURNS READING
As your child grows, take turns reading aloud to each other. This can also be in the form of asking your child to point to the letters and words that they recognize from infancy. Then read the sentences in turn. You can read pages and finally chapters in turn as their skills increase. While reading together, ask questions about what you have read, such as “What do you think will happen next?” or “Why do you think the elephant did this?” The time you spend reading aloud to each other will help build your child’s confidence about speaking aloud and will reinforce what the child learns.

4. LISTEN TO YOUR CHILD
As your little children get older, pay attention to their interests. If they are interested in a particular topic, like dinosaurs, try to find children’s books on that topic. This will help them understand that books are tools to learn more about the things we care about. Their interest in reading will increase as they find books suitable for the subjects they are curious about.

5. MAKE READING A ROUTINE
Making reading a fun part of your child’s life starts with incorporating books into your daily routine. Create a dedicated reading time before bed or while using public transport. While you’re together, make sure to limit distractions like cell phones and television. Part of learning to enjoy reading is to be around books at home. If possible, start building a collection of books for your children. You can choose books on the topics that they are interested in to begin with.
Children are exposed to images of violence almost every day, whether through the media or in real life. Research shows that consuming violent images has a detrimental effect on a child's mental and emotional well-being. We carried out brief research to suggest ways for parents, especially those with young children, to talk about violence with their children. The website theconversation.com recommends four writers who offer insights on how to talk with children about violence, and their approaches can be summarized as follows:

1. **TEACH CHILDREN TO BE RESILIENT**

   Vanessa LoBue, an assistant professor of psychology at Rutgers University in Newark, writes in her article about the ways in which parents can foster a supportive environment to help children develop resilience in stressful situations.

   Genuinely listening to children talk about how they feel not only shows care and acceptance for the child; it also helps them validate and contextualize their feelings, LoBue writes. Allowing children some autonomy to try to solve their problems on their own, even if they fail, can help them practice resilience.

   LoBue informs her readers that helping children develop resilience is particularly critical as Americans often face challenges in everyday life. To support children, parents also need to maintain their own mental health. As LoBue writes: “Building resilience isn’t just kid stuff.”

2. **TEACH CHILDREN TO THINK CRITICALLY ABOUT SYSTEMIC INEQUALITY**

   Perhaps no profession has been under as much public scrutiny lately as that of police officers. In less than a month's span in the spring of 2021, there were at least three high-profile fatal police shootings that claimed the lives of young people in the United States: 13-year-old Adam Toledo in Chicago; 20-year-old Daunte Wright in Brooklyn Center, Minnesota; and 16-year-old Ma’Khia Bryant in Columbus, Ohio.

   Adam Fine, a professor of criminology and criminal justice, and Kathleen Padilla, a criminology and criminal justice graduate student, both at Arizona State University, write that such experiences not only shape how children come to view the police, but also lead to the development of these perceptions at an early age.

3. **VALIDATE HOW YOUR CHILD FEELS**

   Unfortunately, children know violence very well. In the United States, students have active shooter drills and engage in anti-violence movements. Kyle Greenwalt, Associate Director of Teacher Preparation and an associate professor of education at Michigan State University, offers suggestions together with five other scholars about how to talk to students about the US Capitol Riot on January 6, 2021.

   Engaging students in discussions about past and current violent events can allow them to express and process what they are feeling in a safe environment, writes Greenwalt’s co-author, Kei Kawashima-Ginsberg, director of the Center for Information & Research on Civic Learning and Engagement at Tufts University: “Do not dehumanize any student because of their opinion - but teach them to always consider the intent and impact of their response.”

4. **KNOW WHAT YOUR CHILD IS BEING EXPOSED TO**

   The internet is teeming with violent images, and many children are vulnerable to its psychological effects. Daniel J. Flannery, director of the Begun Center for Violence Prevention Research and Education at Case Western Reserve University, describes how exposure to violence can lead to a higher risk of depression, anger, and anxiety.

   Flannery draws attention to the role of parents and writes: “Knowing where their children are, what they are doing and with whom are some of the best ways to help support children. That improves their ability to cope with what is going on in the world around them.”

**Source:** [https://theconversation.com/how-do-i-talk-to-my-child-about-violence-4-essential-reads-159610](https://theconversation.com/how-do-i-talk-to-my-child-about-violence-4-essential-reads-159610)
Education and Its Effects on Sustainable Development Goals (SDGs)

THE FOURTH OF THE 17 SDGs PROJECTED BY UNESCO FOR 2030 INCLUDES EDUCATIONAL GOALS. THE OBJECTIVES SET OUT IN GOAL #4 ARE ALSO ACCEPTED AS A BASIS FOR SUSTAINABLE DEVELOPMENT.

4 GOALS

To provide inclusive education of equal quality and to promote lifelong learning opportunities for all;

To provide access to quality service, with free, equal, and high-quality primary and secondary education for the early childhood development of all girls and boys;

To ensure equal access for all women and men to affordable, high-quality technical, vocational, and higher education;

To eliminate gender inequalities in education and ensure equal access to all levels of education and vocational training.
<table>
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<tr>
<th>REDUCING POVERTY</th>
<th>HEALTH AND NUTRITION</th>
<th>EQUALITY</th>
<th>PARTNERSHIP</th>
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<tr>
<td><strong>171 MILLION</strong></td>
<td><strong>1.7 MILLION</strong></td>
<td><strong>64%</strong></td>
<td><strong>Educate A Child (EAC) has believed in the value of cooperation since its establishment in 2012. EAC is working with partners in many fields to expedite the processes of identification, enrollment, and completion of primary education for more than 10 million out-of-school children. Partners range from major international education, development, and humanitarian organizations to locally based groups.</strong></td>
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<td>If nearly 171 million students in low-income countries learn fundamental reading skills, the number of people living in poverty will decrease.¹</td>
<td>1.7 million more children could reach their full growth potential if all women complete primary education and this would add 12.2 million more children to those who complete secondary education.¹</td>
<td>If all girls in sub-Saharan Africa and Southwest Asia had access to secondary education, child marriages would fall by 64% and preterm births by 59%.¹</td>
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<td><strong>46%</strong></td>
<td><strong>5%-7%</strong></td>
<td><strong>10%</strong></td>
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<td>In sub-Saharan Africa, the risk of being poor dropped from 46% to 28% for those who completed 6 years of education compared to those with no education.²</td>
<td>Schooling for girls reduces national fertility rates by 5% to 10% for each additional year.²</td>
<td>Each additional year of schooling led to a 10% increase in income in 139 countries.³</td>
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Make Room for These Books in Your Library

The adventure of life for humanity from birth to death is also an educational process. We are constantly discovering new things and learning new information in order to survive and be useful for both ourselves and society. That’s why subjects related to education and the theories put forward in this field always draw our attention. As the International Maarif Journal, we try to strike a balance between the theoretical aspects and the practical aspects of the topic while giving you book recommendations.
Pestalozzi was a pedagogue and thinker who left his mark on the 19th century. In his time, he was maltreated, especially by the supporters of classical education, and he could not be understood by the masses. Therefore, his work and experiments did not find widespread application; only a few educational institutions implemented them. However, the effects of his views began to be felt after his death.

The Foundation of Modern School is both critical and innovative. That is to say, on the one hand, it clearly and boldly conveys the negative aspects of a wrong education system, and, on the other, it offers scientific solutions. According to Pestalozzi’s view, the basis of collective harm in education is the disharmony of educational resources with the forces existing in human nature and the increase in the distance between them with each passing day. The principle of simplicity, which should be included in natural education, will eliminate the problems that are experienced. The main issue that educational theorists should focus on is the principle of equality in education.

The solution of the problem will be extremely useful for enlightenment. Children are in a process of continuous development by nature and so natural education efforts carried out in parallel with this development play a key role in the progress of humanity.
“Development in Any Field Is Not Possible in Societies That Do Not Adopt the Principle of Competing in Goodness.”

As Rumi and Yunus said, we have to be reborn every day. We have to be prepared for a world that is changing every day. The driving force of the new era is quality, not neighborhoods. Quality does not carry a passport.

Before we begin the interview, I would like to tell you a little about myself and my experiences during my education and business life.

After completing a master’s degree equivalent program in business economics at Istanbul University, I had different options in front of me. I had a scholarship from the Ministry of Industry. They were probably going to appoint me as the manager of a factory in Anatolia. Fethi Gemuhluoğlu, whom I hold very dear, said, “If I were you, I would prefer to be an expert in the State Planning Organization rather than being a manager in a factory in Anatolia.” I told him that I would accept it if he would be my reference. Back then, in the late 1960s, Planning was a very important institution in Turkey. Turgut Özal was the undersecretary; he had a lively staff. Important people such as Hikmet Çetin, Yılmaz Ergenekon, Nuri Pakdil, and Rasim Özdenören were working in the institution. It would be such a constructive experience for me. The broader your circle, the higher your chances of success. State Planning provided me with a rather broad circle in those days. After Planning, I went to England. Then I started working at a university. My research assistant days were spent in the Erzurum Faculty of Business Administration. After doing my doctorate in the Ankara University Faculty of Political Sciences, I worked as a lecturer at Abdülaziz University in Saudi Arabia. Following my return to Turkey, I worked as a manager in different institutions for 10 years. Then I went back to the university. Finally, now I give lectures on management sciences at Üsküdar University.

WE HAVE TO BE EVERYWHERE AROUND THE WORLD

On my way to England, I visited Fethi Gemuhluoğlu. He said to me, “God never leaves the earth beneath the heavens empty. Don’t get worried; you will have very good friends there. One of them was Hamid Algar. He was a great Oriental expert of English origin, who knew Arabic and Persian. In those days, it was necessary to travel the world for such friendships or to study science. Now, the distance is of no consequence. It is as if we’ve all joined the saints’ circle, as if we cover distances without even moving. The Maarif Foundation is a good example of this. Our elders used to say that those who cannot be all around the world cannot be anywhere. If you want to keep your feet on the ground in İstanbul, Ankara, Diyarbakır, you have to be everywhere in the world. The means of being everywhere in the world is no longer armies. The way to do it is through our esteemed teachers, intellectuals, and universities. The new world is such a world now. Nowhere in the world can problems be solved by war. If it could be, NATO would have solved the problems in Afghanistan and Iraq with all its power. Problems in the new world can be solved with art, culture, knowledge created in
People who do not know Dostoyevsky, Tolstoy, Hugo, Peyami Safa, Ahmet Hamdi Tanpınar lack the necessary perception to comprehend the world. Later, I understood that very well. Politicians cannot understand the world because they do not read novels.
universities, and through sharing this knowledge. So you are pioneers of the struggle to make the world a better place. During my years in London, we did not even learn the address of our embassy. It wasn’t very important to us. Now we have schools, Yunus Emre Institutes, TİKA [Turkish Cooperation and Coordination Agency] offices in every country; there are investors from Turkey in every country. Wherever you go in the world, you now have the opportunity to meet people coming from Turkey.

During my student years, an article by an American journalist named Arthur Sulzberger was published and translated into Turkish. Arthur’s main argument was that a person who knows Turkish could travel from Vienna to the Great Wall of China without any trouble. In those days, the world was bipolar, cross-border travels like today were not possible, and the number of people going abroad was extremely limited. In such a world, that statement was truly impressive for us. Today, I’m taking it a step further. If you know Turkish, wherever you go in the world, you will find people with whom you can communicate. It became even clearer after the collapse of the Soviet Union that Turkish was one of the most spoken languages in the world. You [i.e., the Maarif Foundation] are also going abroad to teach one of the most spoken languages in the world. In this context, you have a great duty and responsibility. What is a language, what gives it power, how does it become more significant? We have to think about these questions as well.

**WRITE DOWN YOUR OBSERVATIONS IN THE COUNTRIES YOU’VE BEEN TO**

I am one of the founders of Mavera Magazine. I am one of the seven people in the “Yedi Güzel Adam” [“Seven Fine Men”] television series. Although of those seven people, Rasim Özdenören, Erdem Beyazıt, Nuri Pakdil, Cahit Zariñoğlu, and Alaaddin Özdenören appeared in the series, I was not portrayed, because I am not from Maraş. The series started and ended in Maraş. Cahit Zariñoğlu and Nuri Pakdil, those fine people, used to give a notebook and a pen to anyone who went abroad so that they could take notes about that country. Make sure to take note of your impressions, thoughts, and observations of the people and streets of the countries you have been to. This has great benefits. Nuri Pakdil gave the first good example of such studies. Nuri Pakdil went to France at the end of the 1960s. He stayed there for 6 months. In those years, the journal Edebiyat began to be published. He began to publish his notes on France under the title of “Western Notes” in the Edebiyat journal. They were later published as a book. In that book, Nuri Pakdil tells about his time in France in a beautiful style, the educational and cultural environments he participated in there, and the thoughts of people from different countries about their own cultures and the West. This book pioneered such work. I also have three pieces of work that I can describe as “travel notes.” The first of these would be my book entitled From Hijaz to Andalusia [Turkish: Hicaz’dan Endülüs’e]. It is a work that shows my observations of Mecca, Medina, Taif, and the Hijaz region during my stay in Saudi Arabia, together with my observations of London and Andalusia. Another is Cities Transcending Time [Turkish: Zamanı Aşan Şehirler]. In this book, I describe the cities of Kazakhstan and Azerbaijan that we traveled to after the collapse of the Soviet Union, such as Baku, Tashkent, and Bukhara. Another one of my works is the book New Rome [Turkish: Yeni Roma], which I wrote about my time in the USA.

While my daughter was studying in the Faculty of Architecture at Istanbul Technical University, she had to go to a university in Los Angeles in the USA because of her hijab. I have also been to America on different occasions and had the opportunity to see cities such as New York, Las Vegas, Los Angeles, San Fran-
Muslim thinker of French origin. After converting to Islam, he left France and lived in Cairo until the end of his life. He has a wonderful work called The Crisis of the Modern World. This piece of work was also translated by Nabi Avcı to Turkish. Although The Crisis of the Modern World was written in the 1920s, it is an excellent work that has remained up-to-date. It is a book that predicted, a hundred years in advance, that the consumption economy and greed of the Western world would cause world hunger, wars, and environmental disasters. Disasters, fires, earthquakes, water pollution, air pollution, and soil pollution caused by Western civilization all around the world following modernity have reached an irrepressible level. In this respect, this book is important in that it calls upon the tradition of wisdom again. Guénon’s knowledge of both worlds also increases the accuracy of his views.

Martin Lings is another great thinker. He was working at the British Museum when I was in London. He has a book called A Sufi Saint of the Twentieth Century. In that book, he tells about the life of an Algerian man of devotion, Ahmad Al-Alawi, a saint who had a huge impact on him and changed his world. If you find this book, I recommend you read it. Martin Lings’s prophetic biography about the Prophet Muhammad is also important in that it takes into account primary sources.

In this context, I would like to recommend Living by Cahit Zarifoğlu [Turkish: Yaşamak], who lived a poetic life and traveled around Europe on his motorcycle, and From the Silk Road to Afghanistan by Erdem Beyazıt [Turkish: İpek Yolu’ndan Afganistan]. During the Afghan jihad against the Soviets, Erdem Beyazıt went to Afghanistan with the help of jihad leaders, with people such as Yücel Çakmaklı and Şenol Demiröz. They made a documentary there. He then turned the notes he took during the filming of that documentary into a book. Cahit Zarifoğlu produced amazing projects even with the limited possibilities of those days. They prepared a multi-vision study that included locations from Sultan Ahmet to the interior of Central Asia. They created an important archive. The reason I am telling you all this is so that you can also undertake these kinds of studies in the countries you are in. Introduce our people of culture and art there and introduce us to those countries and their values, writers, and thinkers.

PEOPLE DEVELOP THROUGH THEIR CIRCLES

In London, I got to know Martin Lings and Seyyed Hossein Nasr. Seyyed Hossein Nasr studied physics at MIT, received a doctorate in the history of science at Harvard, gave lectures at important universities in the United States, served as the rector of Tehran University, had to leave Iran after the Khomeini Revolution, and knows the East and the West very well. He is a very important intellectual. I brought his books to Turkey. He has a great work comprising his lecture notes from the University of Chicago called Man and Nature. In the 1970s, Nabi Avcı translated it into Turkish. I had the opportunity to get to know Guénon as well. Guénon was a remarkable Muslim thinker of French origin. After converting to Islam, he left France and lived in Cairo until the end of his life. He has a wonderful work called The Crisis of the Modern World. This piece of work was also translated by Nabi Avcı to Turkish. Although The Crisis of the Modern World was written in the 1920s, it is an excellent work that has remained up-to-date. It is a book that predicted, a hundred years in advance, that the consumption economy and greed of the Western world would cause world hunger, wars, and environmental disasters. Disasters, fires, earthquakes, water pollution, air pollution, and soil pollution caused by Western civilization all around the world following modernity have reached an irrepressible level. In this respect, this book is important in that it calls upon the tradition of wisdom again. Guénon’s knowledge of both worlds also increases the accuracy of his views.

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Access to information is no longer a problem. There is not any information out of reach in the new world. The world has come to be such a place. You too will be the teachers of such a world. Know this; the students are more aware of this circumstance than you. Just as you know many things better than our generation, your students can use new information sources and technology much better than you can. Şerif Mardin once had a controversial concept called “neighborhood pressure.” It is not possible to talk about the neighborhood anymore; all the neighborhoods are blended together. Now we have quality pressure, elegance pressure, honesty pressure, efficiency pressure. As Rumi and Yunus said, we have to be reborn every day. We have to be prepared for a world that is changing every day. The driving force of the new era is quality, not neighborhoods. Quality does not carry a passport. Honesty, elegance does not carry a passport. If you provide a good product, a good service, and useful information, you will be able to travel all around the world without a passport. You all have Apple brand smartphones or other products. Would Steve Jobs, who founded Apple, need a passport? He travels the world with his products. Steve Jobs was the son of a Syrian father. His father went to the United States to do his doctorate and met his mother. His adoptive mother was the daughter of an Armenian family who emigrated from Malatya. Steve Jobs developed such a product that it affects all of our lives, causing radical changes in art, cinema, and access to information. These people are the pioneers of the new world. You should also bring out the entrepreneurial spirit of your students. You should raise generations who can think critically, have a high capacity to perceive the world, and can read what is happening in the world correctly. Now, even in high schools all over the world, entrepreneurship courses are included in the curriculum. I studied at Istanbul Technical University. We graduated without opening our mouths in the classroom for five years. We learned theoretical knowledge in many fields, from thermodynamics to aircraft engines. Nobody told us, “You are studying in the country’s most important engineering faculty, you must strive to realize your dreams.” Back in our day, it would not be considered appropriate for even teachers to establish companies and take part in the private sector, let alone students. When I was at the Ankara Faculty of Political Sciences, the professors of the business administration department were criticized a lot and labeled as “conglomerate professors.” Now we have a different world. Teachers who are not connected to their fields are now considered incompetent.

GLOBAL VISION IN A SQUARE WORLD

We now live in a time where it is important to develop a global vision rather than a local one. We must be able to see the world from a holistic perspective. After the Berlin wall came down, all the walls in the world came down with it. Without walls, doors, roofs, covers, there is a transparent world where it is no longer possible to hide anything. It is a world without authority, as well. Everyone in this world has to be honest. No one can have a hidden agenda, no one can stay away from anyone. This is what leaders around the world have a hard time understanding. No one should say behind people’s backs what they couldn’t say to their faces. It will most definitely be revealed. Everyone has to...
be transparent and honest. Everyone has to compete in goodness and elegance. **Development in any field is not possible in societies that do not adopt the principle of competing in goodness.** We should always tell our students the importance of competing in goodness and elegance. There is no longer a round, spherical world as we know it, but a flat, square world instead. This square world can be symbolized by the screen in front of you, the phone in your hand. There is no information that you can’t reach through them, there is no place that you can’t see. There is a world that fits on the phone screen now. To put it in the words of Rumi, everyone in the new world has to appear as they are, to be as they appear. As we said at the beginning, it is not possible to deal with the problems in the world by using force. The new world is the world of those who compete in goodness and elegance, and those who know how to be the “giving hand.” It is the world of those whose days are not the same, those who strive to make the next day better than the previous one. Everyone has to learn new things every day. Literature is also vital in this regard.

**THERE IS NO CIVILIZATION WITHOUT LITERATURE, NO LITERATURE WITHOUT CIVILIZATION**

When I first met Nuri Pakdil, he asked me, “Mr. Gürdoğan, do you read novels?” At that time, we wouldn’t even read stories or essays, let alone novels, at a technical university. We were not aware of the importance of literature. When I hesitated a little, Pakdil said: “Look, we are the enemies of those who do not read novels.” It is indeed important. People who do not read novels, do not know Dostoyevsky, Tolstoy, Hugo, Peyami Safa, Ahmet Hamdi Tanpınar... They lack the necessary perception to comprehend the world. Later, I understood that very well. Politicians cannot understand the world because they do not read novels. Neither in the United States and Europe nor in the Islamic world do politicians care about literature. Maybe that is the reason why brute force is so prominent. They are unable to solve any problems. There is a nice saying in Anatolia: “Nothing good comes out of force,” or no result is obtained by force, so you as literature and Turkish teachers should instill the beauties of literature, novels, and poetry in your students. Our starting point should be literature. You will see that the people who shape the world have a rich literary culture. In our country, too, the people who left their mark on the 20th century with their thoughts were generally men of letters. Mehmet Akif [Ersoy] lived during the years of war, he brought poetry to war and war to poetry. Yahya Kemal witnessed again how a state of 4.5 million square kilometers was crammed into Anatolia and he tried to bring the excitement of the past days to the present with his poetry, without giving in to despair. Necip Fazıl, who was born in the Ottoman period and wrote in the Republican era, did not despair and shared his thoughts on what should happen through his writings. He always kept hope, as he says in his famous poem, “Letter to Mehmed from Prison”:

“Rejoice, my Mehmed, for our heads are held high
Rejoice, should we return or should we die
The wheel turns, salvation is nigh
Tomorrow is ours, ours for sure
Sun dawns, sun sets, eternity is ours for sure”

Our culture does not allow pessimism. Nothing comes from pessimism. **The people who pioneer the future will be those who can give new things to the world and, in Yunus’s words, know how to be reborn every day. The biggest source of capital of the pioneers of the future will be literature, culture, and art. The new world is a world without borders. Our culture is a culture of transmigration, constantly migrating. Our ancestors were constantly on the move from the interior of Asia to the interior of Europe, and they considered any place where the call to prayer was recited as their homeland. Hermann Hesse, the author of Siddhartha, says,**

“The Jews carry their homeland with them, their homeland is their literature.” From this point of view, we can say that our ancestors carried their homeland with them, as well. Their homeland was their flag and the call to prayer. As Yahya Kemal emphasized, they advanced into the middle of Europe sprinkling domes along their path.

**WE NEED THE VISION OF BARBAROSSA**

The vision of the new world actually coincides with the vision of our ancestors. We have to grasp the new world as a whole. I would like to share what was written about Barbarossa in a book about him:

“**He was picturing the whole world before his eyes, with its continents, seas, shores, and endless plains. He dreamed of a magnificent empire that would stretch from East to West, across the ocean, to the new world.**”

Indeed, such is the vision of the new world. We have to be everywhere in the world. Otherwise, we cannot be in Istanbul, either. The way to be everywhere in the world is through men of letters. Nowhere in the world is Hugo, Dostoevsky, or Tolstoy asked for a passport. Just as Necip Fazıl, Nazım Hikmet, and Cemal Süreya would not be asked. So we have to be open to the world. That should be your main objective. Going beyond the limits is crucial. As they say in Anatolia: “The bee cannot make honey if it does not come out of its hive.” You should go beyond your limits and get to know the world so that you can get to know your own culture better. **You have a mission to carry our culture across the world and bring the fine aspects of the outside world to our country.** Try to meet nice people and be well connected. Who you know is more important than what you know. Try to meet the writers and artists of the countries you visit, and develop friendships with them. Include comparative examples in your lessons. If you want to introduce our writers to the world, you should also know the writers of the countries you visit. Thank you all for listening.
The concept of sustainable development means “a strategy that goes beyond environmental protection and ecological integrity, which includes economic feasibility; social and human development, including intergenerational equity; and balancing the needs of present and future generations.” The last century particularly witnessed a process in which countries competed with each other on the path of development. This race inevitably brought with it heavy consequences such as the destruction of our natural resources, an unreasonable production and consumption frenzy, inequality between countries, and climate change.

Today, the sustainability of life is of concern rather than the sustainability of development. If we use our resources efficiently without destroying them, we can lead a prosperous life and also protect our planet. In order to achieve this, societies need to be educated and their awareness should be raised within the framework of sustainability. Here, sustainable development and education become crucial.
The 21st century is characterized by major social, economic, environmental, and technological challenges. Among these challenges, global ecological issues such as climate change, the exploitation and contamination of natural resources, desertification, drought, and land degradation endanger the regeneration and sustainability of the planetary foundations of life. Irresponsible use of the resources of the earth and the consequences of global warming will be suffered primarily by those who did not cause it. The unequal distribution of resources in the economy and the consequences of global warming will be suffered primarily by those who did not cause it. The unequal distribution of resources in the economy and of the power is deepening not only between the North and South, but also within the countries. Recently we have been observing a significant increase in mass migration, extreme poverty, natural catastrophes, decreasing biodiversity and power conflicts impacting all parts of the world.

Sustainable development emerged out of these concerns and challenges during 1960s as a strategy and “an organizing principle for global development that supports the well-being of both people and the planet” (UNESCO, 2016, p. 3). Since its first appearance, its meaning has moved beyond environmental protection and ecological integrity, to cover economic viability, social and human development, including intergenerational equity, balancing the needs of present and future generations. Brundtland Report, Our Common Future, published in 1987 brought a wider perspective to sustainable development and dealt with the consequences of traditional economic growth in terms of environmental degradation and poverty (United Nations, 1987). Since then, United Nations (UN) has taken the global leadership in international discussion and strategy formation for sustainable development.
working with governments, civil societies, and other international organizations. Millennium Development Goals and the 2030 Agenda are results of this cooperation with the lead of UN. The 2030 Agenda for Sustainable Development is a plan of action for people, planet and prosperity seeking to strengthen universal peace and provides a common vision for peaceful societies through collaborative partnership. “At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth - all while tackling climate change and working to preserve our oceans and forests” (UN, 2021). Six key elements were identified for delivering 17 SDGs:

- **Dignity:** to end poverty and fight inequalities
- **People:** to ensure healthy lives, knowledge, and the inclusion of women and children
- **Prosperity:** to grow a strong, inclusive, and transformative economy
- **Planet:** to protect our ecosystems for all societies and our children
- **Justice:** to promote safe and peaceful societies, and strong institutions
- **Partnership:** to catalyse global solidarity for sustainable development

**SIGNIFICANCE OF EDUCATION**

Crucial role of education in sustainable development was stressed at a very early stage of the sustainable development discussions and strategy planning. The UN Conference on environment and development, held in Rio de Janeiro in 1992, and The Future We Want report published in 2012 underline the contribution of education to realize the sustainable development goals. Education can contribute greatly to developing and supporting societal path changes. “Increased educational attainment helps transform lives by reducing poverty, improving health outcomes, advancing technology and increasing social cohesion.” (UNESCO, 2013). Education is a key determinant of the social, economic, and environmental transformation that will lead to a sustainable future. It is also an essential requirement for democracy, peace, and equality in human rights. Studies have shown significant return of education to individuals, communities, and nations in terms health, social, civic and community life as well as economy (see GRALE Report 3, 2016; Lochner, 2011; Lutz & Kebede, 2018; Schüller et al., 2004). We can promote the values, skills, and knowledge for a having a world that we can continue to live in only through education. Transformative power of education will enable and empower individuals to be reflective, responsible, conscious, and active global citizens who are equipped with the necessary skills, attitudes, and values. Thus, education, formal and non-formal, lays at the foundation not only of sustainable development goals, but also of a world that every human being can live in dignity and peace.

However, in order to achieve this ambitious goal, the classical concept of education, and thus our entire education system, must be oriented toward new goals of sustainable development and redesigned to be fit for the future. Chapter 36 of Agenda 21 argues for a “new orientation in education for sustainable development”, claiming that “in order to be effective, an education oriented towards the environment and development should focus on the dynamics of the physical/biological and socio-economic environment as well as on human (perhaps also intellectual) development, be integrated into every subject, and use formal and non-formal methods and effective means of communication” (United Nations 1992, Chapter 36.3). Currently, UNESCO defines education for sustainable development (ESD) as “ESD empowers learners to take informed decisions and responsible actions for environmental integrity, economic viability, and a just society, for present and future generations, while respecting cultural diversity. It is about lifelong learning and is an integral part of quality education. ESD is holistic and transformational education which addresses learning content and outcomes, pedagogy and the learning environment” (UNESCO, 2021). Not only the education for sustainable development (ESD) but also education system in
general should be restructured to equip the individuals with the necessary skills, knowledge, and attitudes. Moreover, all educational institutions in formal and non-formal education, from kindergarten to compulsory schools and tertiary institutions to adult education institutions, should “consider it their responsibility to address sustainable development and to foster the development of key cross-cutting competencies related to sustainability” (Rieckmann, 2018, p. 38). This requires for lifelong and life-wide learning approach (life course approach) in which people are motivated to continue learning the necessary skills and knowledge and in which sustainability is part of the daily discourse at every aspect of life.

**WHAT KINDS OF SKILLS ARE NECESSARY FOR A SUSTAINABLE FUTURE?**

Despite the agreement on the key role of education in sustainable development, skills, content, and methods regarding the education for sustainable development are open to debate due to the fact that sustainability and sustainable development are complicated and multifaceted concepts. During the last three decades focus of the ESD has moved from input (content) to outcome (competences) (Rieckmann, 2018). Currently there are several frameworks identifying the sustainability competences, “clusters of skills, knowledge abilities and behaviors that people need to be successful in a particular endeavor” (Engle et al., 2017, p. 290).

OECD’s key competencies were one of the first attempts to identify the set of competencies individuals need to face the challenges of modern world. The OECD project ‘Definition and Selection of Competencies’ (DeSeCo) (1997) classifies key competencies into three categories:

- Using tools interactively (the ability to use language, symbols and texts interactively, the ability to use knowledge and information interactively, and the ability to use technology interactively);

- Interacting in heterogeneous groups (the ability to relate well to others, the ability to cooperate, and the ability to manage and resolve conflicts); and

- Acting autonomously (the ability to act within the big picture; the ability to form and conduct life plans and personal projects; and the ability to defend and assert rights, interests, limits and needs).

Another widely known frameworks is the “Gestaltungskompetenz” (Shaping competencies) developed by de Haan (2006). His meta-competence framework involves eight key competencies for sustainability: foresighted thinking; interdisciplinary work; cosmopolitan perception, transcultural learning and co-operation; participatory skills; planning and implementation; empathy, compassion and solidarity; self-motivation and motivation of others; distanced reflection on individual and cultural models
More recently, Wiek et al. (2016) identified six main key competencies: systems thinking competence, anticipatory competence, normative competence, strategic competence, interpersonal competence and integrated problem-solving competence. Lambrechts et al. (2013) also identified six competences for sustainability: responsibility, emotional intelligence, system orientation, future orientation, personal involvement, and ability to take action, while Lozano et al. (2014) proposed 12 competences—systems thinking; interdiscipli- nary work; anticipatory thinking; justice, responsibility, and ethics; critical thinking and analysis; interpersonal relations and collaboration; empathy and change of perspective; communication and use of media; strategic action; personal involvement; assessment and evaluation; and tolerance for ambiguity and uncertainty.

Engle and her colleagues (2017) developed a framework for sustainability meta-competencies based on systematic literature review and key informant interviews:

- Systems thinking (ability to analyse complex systems across multiple domains and at different scales)
- Temporal thinking (ability to draw upon and anticipate states and narratives of past and future societies and environments)
- Interpersonal literacy (ability to comprehend, motivate, enable, relate to, and communicate across diverse individuals, political systems, and organizations)
- Ethical literacy (ability to identify and assess ethical issues and controversies, related to sustainability, and to discuss, respond to, and reconcile them, applying personal and societal values and goals)
- Creativity/ imagination (ability to envision, develop and apply innovative and strategic solutions and frameworks in order to adapt to changing and challenging situations)

- Foundational competencies (based on education and adaptation. Include: logical thinking, critical thinking, quantitative analysis, numerical reasoning, reading and writing).

These frameworks are crucial in creating a direction for ESD and they require novel didactical and pedagogical approaches that are learner-centered, transformative and action oriented (UNESCO, 2017) which requires training the educators and teachers.

ROLE OF EDUCATORS

Educators are change agents. They have a key role in developing the skills for a sustainable future and transform the society through their pedagogical approaches. To be able to do that, educators need to be equipped with ESD competences. There are also certain sets of skills and competences for teachers and educators within ESD. UNESCO (2017), for example, defines a set of learning objectives for teachers to be able teach sustainability and sustainable development. UNECE (2012) developed a competence framework for educators built on Delors’ four pillars of education framework:

- Learning to know refers to understanding the challenges facing society both locally and globally and the potential role of educators and learners (The educator understands....);
- Learning to do refers to developing practical skills and action competence in relation to education for sustainable development (The educator is able to....);
- Learning to live together contributes to the development of partnerships and an appreciation of interdependence, pluralism, mutual understanding and peace (The educator works with others in ways that....);
- Learning to be addresses the development of one’s personal attributes and ability to act with greater autonomy, judgement and personal responsibility in relation to sustainable development (The educator is someone who....).

From a holistic perspective, it is utmost important to develop policies and regulations to provide conditions for teachers and educators conducive to development and life-long learning for sustainable development.
in-service training and continuing education opportunities should address the ESD competencies for educators and should create space and resources for the application of ESD. In addition to national and regional policies to support and promote ESD, teachers and educators can integrate the three important aspects of sustainability education into their teaching: knowledge and understanding, skills and competences, and values and attitudes.

WHAT IS HAPPENING IN AUSTRIA?
Austria is actively committed to the process of promoting ESD and published its “Strategy for Sustainable Development” in 2008 after 3 years of design process which was conducted through open discussion with non-governmental sector, and volunteers from formal, non-formal and higher education sectors. The strategy aims to support a transformation of awareness toward sustainability among teachers and learners alike, and also to interlink the actors. The strategy comprises the following relevant elements: Establishment within the education system; Research and innovation; Partnerships and networks; Scenario development; Competence development among teachers; Monitoring and evaluation. Since then, background programmes and related school networks have been existing concerning e.g. ecologisation of schools, health promoting schools, science learning supported by the Austrian Federal Ministry of Education, Science and Research.

At the higher education level, ESD and sustainability has gained more importance recently. Universities have been bringing sustainability into focus not only for teaching, but also for research and administration. Currently an initiative, Universities and Sustainability Goals (UniNetz) has started to work on the SDGs and how Austria can reach the development goals until 2030. The UniNetz project aims at providing a holistic and comprehensive look at the current situation of SDGs in Austria and to develop concrete options to the federal government in order to support the implementation of the 2030 Agenda with its 17 Sustainable Development Goals in Austria. These options decided by working groups includes theoretical and practical background and concrete measure to reach the goals of the options. For SDG4, results showed that there are several points of improvement and 20 options were delineated. Some of the crucial ones are:

Option 4.3: Anchoring education for sustainable development in the education framework for elementary educational institutions in Austria across all federal states

Option 4.4: Anchoring concepts of education for sustainable development in the training, further training and continuing education of educators in elementary education

Option 4.5: Teacher training for sustainable development

Option 4.7: Establishing or further developing framework conditions (school autonomy, school autonomy, school autonomy) for the establishment of a democratic, participatory culture at Austrian schools to promote peace and sustainable development

Option 4.8: Digitization and sustainability - educational concepts for sustainable development in the digital age

Option 4.9: Develop and implement sustainability strategies in a participatory manner at all universities

Option 4.10: Anchor educational concepts for sustainability in all curricula at universities and colleges

Option 4.11: Establish ESD continuing education programs for university teachers at universities and colleges

Option 4.13: Strengthen active civil society engagement, critical thinking and solidarity in terms of sustainable development through a) political education and b) ESD, Global Citizenship Education and other concepts

Option 4.14: Systematically promote subject-specific competencies for shaping sustainable development in every subject

Option 4.15: Multiply education for sustainable development
These options are not yet presented to the ministry, but we will be following the reaction from the politics. Last but not least, Austrian governments (federal and state) have been increasingly sparing time and funding for the sustainability at all levels of educations and current attempts indicate it will increase in the future.

**FUTURE DIRECTIONS**

It is well-established that education is key to our future economically, socially, politically and technologically. ESD has a crucial role in understanding the current situation and how we can act to reverse the negative effects for a livable earth. If we want to act now, we should find ways, tools and methods to develop these competences. For realizing this, we need networks to work cooperatively, we need resources, we need know-how and we need competences. We should remind ourselves that all of these competencies listed here are important part of the future skills that are transversal and analytical. We cannot separate the sustainability skills from the skills that are defined for the future work life especially in a complex world changing at a mind-blowing speed. Thus, sustainability competences should be considered and taught to start sustainable living. Governments have the main responsibility in this, yet educators are not helpless and they can and should take action in their class today.

**REFERENCES**


“Regional Development-Oriented Mission Differentiation and Specialization”
Projects in Turkish Higher Education

Regional development projects give universities an important mission for the economic and cultural development of the regions in which they are located, in addition to education, which is their traditional activity.
The rapid developments and radical transformations in the world force us to develop new systems and to change our traditional structures. The efforts of organizing higher education and universities are also affected by this change in a systematic way. Universities tend to be global by following global developments and to be regional by connecting their specific regions and focusing on regional problems. In this context, in addition to the traditional missions of universities, which are education and research, increasing their impact on the regional economy and social structure has also become a priority. These global demands of change and transformation have affected Turkish higher education, as well, and it has undergone several changes and transformations with positive political decisions. With the decisions made by those in political power to provide access to higher education for people in our country, which has a young population, the number of universities has grown with the opening of new universities, prioritizing the agenda of “at least one university in every province,” and the current number of universities has reached 210 with the addition of these new ones. This quantitative change naturally brought along the search for qualifications of universities. This search for qualifications is not only for universities, however; it has also entered the agenda of the Council of Higher Education (Yükseköğretim Kurulu: YÖK). Since an increase in the number of homogeneous universities offering the same departments and programs will bring along problems of manpower or employment, it was planned to break up that similarity and turn it into a benefit by implementing mission differentiation in certain universities. In cooperation with YÖK, the Presidency of Strategy and Budget, the Ministry of Industry and Technology, and TÜBİTAK in order to ensure the differentiation of universities and create new paths from knowledge to production, the Regional Development-Oriented Mission Differentiation and Specialization project was initiated, especially for higher education institutions established after 2006, in order to increase the contribution of universities to the regions they are located in and to encourage universities to specialize in certain fields.

THE ROLE OF UNIVERSITIES
The call answered by 41 universities in 2016 was evaluated based on over 100 criteria by the commissions formed at YÖK and, in the first stage, 5 universities were included in the project for regional development and mission differentiation. These first 5 universities selected in 2016 were as follows:

- Bingöl University - Agriculture and Basin-Based Development
- Burdur Mehmet Akif Ersoy University - Agriculture and Husbandry
- Düzce University - Environment and Health
- Kırşehir Ahi Evran University - Agriculture and Geothermal Energy
- Uşak University - Leather, Textiles, and Ceramics

In the following years, 10 more universities, with 5 each year, were included in the regional development project. Currently, 15 universities are working to realize this mission.

As is known, the most fundamental role of universities in regional development is to move forward the long-term innovation potential of the region. Innovation systems are essentially based on the individual performance of actors such as universities, research institutes, firms, organizations, and public institutions capable of creating and promoting innovation in a national or regional economy, as well as their interactions as part of a system. Universities have two separate roles in regional development:

i) They are the core actors of these regions because they produce and disseminate knowledge;

ii) They are cultural actors in accelerating and developing regional cooperation and interaction.
The reason behind this is that universities can develop their sectoral perspectives by using their interdisciplinary connections, knowledge, skills, and experiences. Universities can act as a kind of conductor in uniting regional powers, bringing together sectors that need intensive knowledge, and helping them all work in harmony. In addition, they can work beyond their traditional studies, being in a position to create a strategy for the region. Another important aspect of universities in regional development is their ability to transform the targeted region into an environment where information can be accessed, disseminated, and shared by local actors.

Within the framework of the above-mentioned missions of universities, those involved in the regional development and specialization project have focused their R&D studies on the regional projects they are carrying out. In addition, new undergraduate and graduate programs have been opened in order to realize the specialization related to the project, and they have employed academic staff suitable for the purposes of the regional projects. These studies focused on regional development have not only ensured the academic study of the resources of the regions and the aspects that are open to development; they have also contributed to the creation of cooperation and new production areas with the transfer of academic data to the sectors in question. It is seen that the first 5 universities carrying out such regional development projects have achieved success in creating new business fields, sector collaborations, and new brands in their project output regions.

**AHİ EVRAN UNIVERSITY AS A MODEL**

The contributions of those pilot universities to the achievement of their goals and regional development within a 5-year period are monitored periodically through evaluations made with the participation of YÖK and other relevant institutions. The outputs of the agricultural projects of **Kırşehir Ahi Evran University**, which has undertaken a mission in the field of agriculture and geothermal energy, are as follows:
i) Roughage cultivation,  
ii) Greenhouse cultivation  
iii) Walnut cultivation.

Furthermore, the university's projects on health are as follows:

i) Physical Therapy and Rehabilitation Hospital with 150 beds where geothermal water is used,  
ii) Traditional and Complementary Medical Center,  
iii) Athlete Health Center.

Regional development contributions from existing projects are as follows:

i) Roughage cultivation: In Kırşehir, where livestock breeding is performed extensively, sowing has been carried out on nearly 1250 acres of land to meet the roughage needs of our farmers, who have been engaged in animal husbandry with new feed types and new feed mixtures in different areas since 2017. The aim of this project, carried out by faculty members of the Faculty of Agriculture, is to ensure the production of higher-quality forage crops for roughage, which is the main input of livestock producers, and to plant new types of plants or more effective and efficient mixtures to reduce the costs for our farmers. Since this study reduces the roughage costs of producers, it opens up a development area for husbandry. On the other hand, this roughage production with our farmers is being studied academically in terms of regional development as a contribution to specialization. Thus, forage cultivation, which is a problem in the region, is being discussed academically and is the subject of academic articles, being transformed into a regional contribution through cultivation by farmers in these croplands.

ii) Greenhouse cultivation: Turkey is a country rich in geothermal resources, and Kırşehir is a province rich in geothermal resources. However, the conversion of geothermal resources to energy or their use in production is not at the desired level in our country. The aim of the greenhouse cultivation project is to reduce costs by using geothermal water, which is an important natural resource of the province, for heating in greenhouse cultivation and to create a new business field in the region. When heating is compared between the regions where greenhouse cultivation is performed in Turkey, it is seen that the use of geothermal energy in heating reduces the cost to a quarter of the regular cost. This advantageous situation attracts investors to the region and creates new business areas and accordingly new employment areas. After the pilot project in our region, a firm invested in a greenhouse of nearly 125 acres in size, which is currently active. An R&D greenhouse of about 0.40 acres was also established within the scope of the regional development project to transform the university's academic knowledge of greenhouse cultivation into production. Since the day that R&D greenhouse was put into operation, 40 projects related to the agricultural production of the region and greenhouse cultivation have been carried out. The goals of these projects include efficiency, product diversity, and new production techniques. In this regard, the Faculty of Agriculture is studying the production of the product, the Faculty of Engineering and Architecture is studying the air-conditioning and other technical requirements of the greenhouse, and the Faculty of Economics and Administrative Sciences is studying the status of the market for these products with scientific methods. Thus, through multidisciplinary actions, many contributions are made to the singular goal of regional development.

iii) Walnut cultivation: Within the scope of this project, the goal was to achieve the climate-species-soil harmony needed by the producer via scientific methods needed by the producer via scientific methods in order to increase the yield of traditional walnut cultivation in the region. This goal was pursued by guiding producers in selecting suitable species for the local climate with the help of expert faculty members after determining the climatic characteristics of the region by remote sensing method and ensuring the protection of the producers against agricultural frosts.
Through the use of geothermal energy, which has potential for development in the region, three other projects have been carried out in the field of health:

i) Physical Therapy and Rehabilitation Hospital: Geothermal water is a treatment component that is effectively used in physical therapy and rehabilitation treatments. In order to transform this potential of the region into added value and to meet health needs, a 150-bed hospital for physical therapy and rehabilitation was built and it operates according to the mission of regional development. In terms of specialization, our units working in the field of health, and especially our Faculty of Medicine, are contributing to the international recognition of the geothermal resources of the region by conducting a number of academic studies on physical therapy and rehabilitation.

ii) Traditional and Complementary Medical Center: This center works with certified specialist doctors in 5 fields to find solutions to people’s health problems and people are showing great interest in it.

iii) Athlete Health Center: This center was planned to treat sports injuries with the use of geothermal water.

The results of the Regional Development-Oriented Mission Differentiation and Specialization projects carried out by the other pilot universities are contributing to their respective regions in ways similar to that explained here within the context of Kırşehir Ahi Evran University. Düzce University cooperates with producers in the region in the field of environment and health and creates new products and new brands with work being done with different companies. Mehmet Akif Ersoy University works with people in the animal husbandry sector in the region and develops new techniques in many areas related to animal husbandry, such as production and disease. Bingöl University works on beekeeping, an asset of that region, on an academic basis and cooperates with beekeepers to produce honey of better quality. In addition, it creates new markets by obtaining new varieties of bee products. Uşak University is paving the way with many studies in the field of design and is meeting the needs of the region with its new designs. The subsequent 10 pilot universities are also improving the economic dynamics of the regions they are in with the projects they have started in their own fields, bringing together new arrangements that emerge through the power of knowledge with production opportunities. Therefore, each region recognizes its own potential with the academic approach of the university and assumes new positions in order to transform values into production.

THE EFFECTS OF MISSION DIFFERENTIATION ON REGIONAL DEVELOPMENT

When evaluated in general, universities undertaking regional development mission differentiation primarily enables the universities to assess the value of the provinces in which they were founded from an academic point of view. Local and regional knowledge is circulated internationally through academic studies and provides international recognition of local potential. Since universities are universal institutions by definition, they fulfill the mission of universalizing the values of their own regions through academic means. In the context of the outputs of regional development projects, the knowledge that has passed from the local level to the universal must first be transformed to production at the local level. Due to this necessity, transferring the knowledge that is obtained to the relevant sector and transforming it into production and employment are considered as the main outputs of this project. Considering that each region is different from the others, such regional development projects require universities to study the economic and cultural values of the regions in which they are located as well as their traditional activities of education and training. Hence, Turkish higher education is turning toward a higher education approach that is prepared with different regional contributions to universal goals, leaving behind the model of higher education in which all components serve the same function with the same methods. In conclusion, within the scope of these projects’ objectives, universities become the main actors in the process of transforming knowledge into production and production into employment. The expectation for universities is that they will be the pioneers of this process.
In today’s world, where natural resources are being depleted rapidly in the face of many problems such as fires, floods, storms, and hurricanes that we face both in our country and in the world as a result of global climate change, shouldn’t educational institutions be reorganized within the framework of sustainable living paradigms both in terms of structure and content?

Adopting the principles of sustainable life and transferring them to our children, to whom we entrust our future, requires our active participation in the process. Active participation can be achieved by individuals who know what they need to do for a sustainable life and are well aware of the circumstances. These achievements are also the primary objectives of schools, which give us real-life experiences from an early age. Sustainable schools play an important role in raising young generations that have an awareness of sustainable living.

The concept of sustainable schools has come to the fore with the concept of sustainable development now present in every aspect of our lives. In order to understand this concept of sustainable schools, it is necessary to focus on the meaning of sustainable development first. The concept of sustainable development first appeared in the Brundtland Report prepared by the World Commission on Environment and Development (WCED). In this report, the concept of sustainable development was defined as “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations, 1987). Ensuring sustainable development in line with the objectives of the concept requires creating a sustainable environment, a strong economy, and improvement in all areas of the social structure. When considering the concept of sustainable development, it is necessary to evaluate not only one dimension but rather the environmental, social, and economic dimensions all together, situating...
them within decision-making mechanisms (Akın, 2018; Seydioğulları, 2013). Education is the most important tool of sustainable development in realizing all these processes. The first steps toward awareness of sustainable living should be taken in schools. Therefore, sustainability practices in school buildings constitute an inevitable step toward sustainable development as they will provide the opportunity for future generations to experience the idea of sustainable life. This situation has caused sustainable school structures to emerge. So, what are the components of a sustainable school?

WHAT IS A SUSTAINABLE SCHOOL?

Education is crucial for acquiring skills and behaviors consistent with sustainable development. It is a vital tool of change in transforming society for a more sustainable future. The reorientation of education at all levels is considered as a tool that can bring about the desired changes for sustainable development (UNESCO, 2002, 2005). Students will have the opportunity to learn by doing and living as a result of school buildings being designed according to sustainability principles, and they will have the opportunity to be raised according to these practices themselves. In this way, the concept of sustainability will begin to form in the minds of students.

The most important component of the sustainable school concept is for the school building to have a sustainable design. The design of school buildings and their surroundings is one of the important factors in transforming sustainability into behaviors. In order for a building to be defined as sustainable, it must meet certain standards in areas such as sustainable land planning, water and energy usage, use of ecological materials, building air quality, user health, transportation, and waste control. With these criteria, it is aimed to use resources efficiently and reduce the negative effects of the building on the environment in the design and construction process. Buildings that use less energy and water resources, produce less waste, and offer better quality environments to their users are called sustainable buildings (Çilhoroz & Işık, 2018; URL-I).

When constructing sustainable education buildings, an accessible and safe environment for everyone, established on a plot of land with the least negative impact on nature and that helps strengthen the students’ bonds with nature, should be preferred. Imagine a school whose energy needs are met with resources such as solar, wind, hydroelectric, and geothermal energy, based on the conditions of your own region. Where you can use public transit as one of the sustainable means of transport or your own bicycle to go to school. With bicycle parking areas and bicycle lanes. With classrooms that have large windows to benefit more from daylight and save energy. A school that has roof windows and where rain water is collected and used to irrigate the garden. One that is built with local materials, has heat-insulated walls, and uses energy-saving light bulbs and water-saving taps. One with great acoustics, and with recycling bins to reduce waste. One where only local and nutritious foods are sold in the cafeteria, and where there is a green-
house in the schoolyard, in which students grow their own foods. With chicken coops that let students produce their own eggs. With bird nests in the trees in the schoolyard. One that has playgrounds where students can play comfortably. Where the building's own structural design is included in the curricula as a learning environment. One that develops curricula that adopt holistic approaches, giving the opportunity to experience sustainable life awareness in the context of real-world problems and that lets parents and other residents of the region benefit from the building's facilities (such as the school building's sports facilities, library, meeting rooms, and classroom spaces).

All of these dimensions of a sustainable school stated above bring about many positive results in economic, environmental, social, and educational processes in the creation of a philosophy of sustainable life. When we evaluate it in terms of economic outputs, there are savings of water and energy, reduced amounts of waste, and economic income generated from selling the produced vegetables or eggs. In terms of educational outcomes, students have the opportunity to learn by experiencing sustainability and making it a life philosophy; exhibiting the knowledge, behaviors, and attitudes they have gained outside of school; and increasing their interest in and motivation for school. In environmental terms, there is an increase in biodiversity around the school, enrichment of the soil at the end of the composting process, and intensification of recycling activities. In social terms, the school is adopted by students, staff, parents, and the general public; a sense of belonging is fostered and the development of social responsibility and self-esteem is ensured with increasing student leadership (Gough, 2005, 2006).

As a result of evaluations, it has been observed that sustainable education structures give important messages to children and society about leaving a more livable world to future generations and also create lively learning centers for them. Sustainable schools provide a healthy and comfortable environment conducive to learning and student success while conserving energy and resources (Olson & Kellum, 2003). When students are involved in monitoring and improving the use of energy and resources at school, they can learn about life more sustainably and efficiently (Hacking, Scott, & Lee, 2010).

So how can we transform our schools into more sustainable living spaces? How can we guide administrators regarding the steps they should follow in sustainable school planning?

**WHAT SHOULD BE THE BASIC STEPS IN DESIGNING SUSTAINABLE SCHOOLS?**

There are eight main topics supported by the international literature that should be considered while planning sustainable schools or transforming existing schools into sustainable living spaces. These are food, energy, water, waste, transportation, building design, social welfare, and participation with a global dimension.

The first of these points entails ensuring the sustainability of the school’s food services. In this context, it is recommended that all schools arrange healthy, local, nutritious, mostly unpackaged, organic, seasonal, sustainable food and beverage services according to the near-to-far principle. An approach that prioritizes local suppliers should be adopted while meeting food needs. With such an approach, sustainable schools will also contribute to the prevention of obesity, one of the biggest global health problems.

Other components of a sustainable school are energy and water. In this context, sustainable schools are expected to be role-model institutions in terms of energy efficiency, use of renewable energy resources, effective use of rain water, and water savings. Thanks to these implementations, while the budgets of the schools are protected economically, they will also contribute to future generations by reducing energy and water demands.

Increasing use of vehicles increases traffic, air pollution, carbon emissions, and life-threatening accidents with each passing day. These problems show that schools should make sustainable choices regarding transportation and traffic. Sustainable
transportation preferences are among the important components of a sustainable school. Such schools should raise their students’ awareness of issues such as the use of public transportation, walking, cycling, and vehicle-share programs. In this way, while reducing carbon emissions, healthier and happier individuals will be raised at the same time.

As in the activities carried out within the scope of the zero waste project initiated here in Turkey, sustainable schools should set an example for society in waste management and reduction. These schools should embrace the mission of being institutions that encourage recycling as much as possible, repairing broken items, reusing products for different purposes without throwing them away, and teaching behaviors that prevent unnecessary shopping. As the fourth main point, the principle of zero waste is another important component that schools should address.

In addition to food, energy, water, transportation, and waste, one of the most important components of a sustainable school is the school building itself. First of all, every school building, old or new, must visibly demonstrate sustainable development to every individual using that school. For example, it should offer opportunities to highlight sustainable practices in the selection of materials used in the construction of the building and in the decision-making processes regarding materials and equipment purchased for the school. For instance, activities such as growing food, protecting biodiversity, and incorporating nature in the schoolyard should increase the value of students’ learning processes and bring them closer to nature.
In addition to all these components, sustainable schools must provide an inclusive and welcoming atmosphere that is respectful of human rights and values the participation and contributions of all, regardless of their background, culture, age, religion, or ability, challenging all forms of prejudice and injustice. It is also essential in this process to have administrators who are willing to put sustainable life at the center of school activities, to influence the culture and structure of the school, and to restructure roles and reorganize responsibilities. With their facilities and extensive networks, schools should act as centers of learning and change in their local communities. The participation of students in solutions for local and regional problems in cooperation with society will provide an opportunity to strengthen their ties with society. When we look at this on the global scale, the increasing interdependence between countries changes our perspectives on the world and ourselves. By cultivating an international perspective among young people, sustainable schools can foster an appreciation of the impact of their personal values and behaviors on global challenges.

There are small steps that we can all take simultaneously for the vision of sustainable life. Nature generously offers us its resources to sustain our lives. However, we do not give nature the opportunity to renew itself. Although there is only one planet that we can live on, our ecological footprints are growing rapidly. We don’t have much time left to reorganize our lifestyles within the limits of nature’s capacity. That is why we must be ready to take individual responsibility to learn and reduce the size of our footprints (Keleş, 2007). In order to achieve this, we must immediately proceed to organize our schools, the environments where our youth spend the most time, as sustainable living spaces. We must help people all over the world improve their quality of life for the future, and we must not increase the global problems that negatively affect the lives of others because of our lifestyles. We should understand that sustainable development is more than just recycling. It is a way of thinking that we need to implement in our lifestyles, minds, values, and behaviors. For a sustainable life, we must accelerate the transition to a sustainable school system within the framework of holistic approaches.

As a result of evaluations, it has been observed that sustainable education structures give important messages to children and society about leaving a more livable world to future generations and also create a lively learning center for them.

REFERENCES
What a sustainable school looks like in the Australian Curriculum

Schools are a powerful force to make our communities aware of education for sustainability and it is more effective when it is implemented as a whole-school approach.
In Australia, we generally use the term Education for Sustainability, rather than Education for Sustainable Development. We are aware that the definitions of sustainability are influenced by people’s values and culture. The best-known definition of sustainable development is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

When we come to Education for Sustainability in Australia, it is necessary to re-orient the way we live and work, Australia becoming a sustainable society. We need to create a sustainable environment where individuals and communities have the knowledge, capacity, values, and more importantly motivation in their personal lives. According to the Australian Research Institute in Education for Sustainability, there are five components of Education for Sustainability.

**COMPONENTS OF SUSTAINABLE EDUCATION**

The first one is envisioning a **better future by establishing** a link between long-term and immediate actions and motivating people to behave by harnessing their deep aspirations. This component is very important to identify relevance and meaning for different people.

The second component is **critical thinking and reflection**. It is essential to re-shape our world, knowledge, and opinions by being aware of unsustainable practices. It provides us a new perspective and develops and encourages alternative ways of thinking.

The third component is **participation**. It is more than consultation because it involves planning and has control of community decisions. It also creates commitments to the actions.

The fourth component is a partnership for change. It makes stronger ownership to sustainability actions via formal and informal opportunities for learning. It motivates and contributes to value to initiatives. The last component is systematic thinking. In systematic thinking, the whole process is more important than the sum of its individual parts and it is a better way to understand and manage complex situations. The process takes an important role than things and it integrates decision-making and adaptive management techniques.

**THE IMPORTANCE OF THE WHOLE SCHOOL APPROACH**

Schools are a powerful force to make our communities aware of education for sustainability and it is more effective when it is implemented as a whole-school approach. A **whole-school approach** supports what has been learned in the lessons and students go beyond in the knowledge about sustainability in the community. They have a good sense of motivation and opportunities to move forward for sustainability around the school, in their community and outside of their community to have a sustainable lifestyle. When

Sustainable education in Australia is more future-based and focuses on protecting our environments. All subjects in the Australian Curriculum have a contribution to the sustainability cross-curriculum priority. They are all consistent with the content and aim of the area of the study.
the schools implement a whole-school approach to education for sustainability, it carries a strong message that sustainability is at the centre of the school environment and shows how a school can integrate sustainability into their strategic plan, operations, networking, partnership in the community, and curriculum. There are various frameworks for schools to adopt education for sustainability as a whole-school approach. Before mentioning the sustainable schools’ frameworks in Australia, I will explain the **Australian Curriculum for Sustainability** and its connections across key learning subjects in curriculum.

**CURRICULUM AND SUSTAINABILITY RELATIONSHIP**

First of all, to have sustainability in the Australian cross-curriculum, it is important to have an understanding of the ways social, economic, and environmental systems interact to help and maintain human life. When we give the priority of sustainability in our curriculum, students obtain the knowledge, skills, values, and different world views to contribute to a more sustainable style of living. Sustainable education in Australia is more future-based and focuses on protecting our environments. All subjects in the Australian Curriculum have a contribution to the sustainability cross-curriculum priority. They are all consistent with the content and aim of the area of the study. Each subject has a contribution differently. For example, some of them help students to work with ecological and human systems and to appreciate their interdependence. Others contribute to the development of world views necessary for students to act to create a more socially and ecologically just world. I would like to shortly mention how we cover sustainability in different subjects in the curriculum.

English helps students develop the skills necessary to investigate, analyse and communicate ideas and information related to sustainability. The content in the language, literature, and literacy develops knowledge about social, economic, and ecological systems and world views that promote social justice. In mathematics, students can develop the proficiencies of problem-solving and reasoning essential for the exploration of sustainability issues and their solutions. Mathematical understandings and skills are necessary to measure, monitor, and quantify the change in social, economic, and ecological systems over time and statistical analysis enables the prediction of probable futures based on findings and helps inform decision-making and actions that will lead to preferred futures. In
science, students appreciate that science provides the basis for decision-making in many areas of society and that these decisions can impact on the earth system. They understand the importance of using science to predict possible effects of human and other activity and to develop management plans or alternative technologies that minimise these effects. Humanities and Social Sciences helps students develop the ability to question, think critically, solve problems, communicate effectively, make decisions, and adapt to change. The Arts provides engaging and thought-provoking contexts in which to explore the nature of artmaking and responding. Technologies enable consideration of preferred futures. When students identify and critique a problem, need or opportunity; generate ideas and concepts; and create solutions, they give prime consideration to sustainability by anticipating and balancing economic, environmental, and social impacts. Health and Physical Education, students explore how they connect and interact with natural, managed, and built environments, and with people in different social groups within their social networks and wider communities. Languages contribute to students’ capabilities to investigate, analyse and communicate concepts and understandings related to sustainability in broad contexts, and to advocate, generate and evaluate actions for sustainable futures.

SCHOOL ENVIRONMENT SHOULD BE INCLUDED IN THE PROCESS

As we see in each learning area, the Australian Curriculum provides framework for schools to be Sustainable Schools. There are different programs such as the Australian Sustainable Schools Initiative. They provide structured supports for the process of reducing water and energy consumption and waste production. For example, as a whole-school approach, Year 5 and 6 students in one of...
the public schools in NSW, investigated biodiversity and adaptations within the school grounds and these are linked to the Australian Curriculum. In this project, students were able to participate in learning activities investigating adaptations in animals and plants. They were also able to explore the differences between habitats in their school grounds. Students as a whole-school, enjoyed the opportunity to investigate surroundings and to look closer to surroundings with attention as they contributed to Atlas Living of Australia.

Another example of sustainable schools’ project was hosting a successful evening event to raise environmental awareness in the school community and celebrate students’ sustainable projects. This event also aimed to highlight the schools’ environmental creativities and encourage “green” behaviours, increase parental involvement in school environmental events, and fundraising for endangered animal charities and sustainability programs. It was a very successful event for all school community; the principal, assistant principal, environmental teachers, parent association, the student and parent community, volunteers, other sustainability educators (water, waste, biodiversity), as well as the local council. This event is flexible and can be easily modified by any school and be resourceful for environmental initiatives in the school environment and for the community.

We could increase the examples of sustainable schools such as building a garden project as whole-school approach to build a vegetable garden and worm farm, improving the school’s overall attitude towards caring for the environment. Another school is intending on making their school a zero-carbon school to power the school with solar energy. We could see those sustainable school examples in a whole-school approach framework every day in more schools. More importantly, once the teachers are confident involving sustainability in their subjects, they can broaden their engagement with sustainability by applying its principles across the school. Therefore, to create sustainable schools we need to educate our teachers and build their confidence and engage our students and the whole school community in awareness of sustainability and actions sustainability for education. Engagement is one of the key aspects to create sustainable schools as Confucius quoted

“Tell me and I will forget. Show me and I may remember. Involve me and I will understand.”

In conclusion, education for sustainability is more than just providing information about the environment. It is a whole process that motivates, encourages, and engages individuals in creating sustainable futures. It is not only a process that builds skills but also a change strategy that will assist people and communities to move towards sustainability.

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Is Education for Sustainable Development?  
A Brief Overview of Development

It seems like all countries agree on the same idea: Development cannot be abandoned! So, is it possible to minimize or eliminate the damages of development without abandoning it? This question has led to the emergence of some new concepts.
It is everyone’s dream to be wealthy and live a luxurious and happy life. Living in a modern house in a big city, driving a nice car, traveling easily on highways, having an all-inclusive holiday at a 5-star hotel, traveling to different countries by plane, having the best mobile phone... In short, we want to live comfortable lives with high standards, having everything we desire. We think that such opportunities can only be found for everyone in a modern and developed country. Every citizen of a country can be proud of the size of their country’s industry and economy. However, we do not want to remember that the greater the development, the greater the damage it may cause.

In the most general sense, development is an important process that shows the welfare, growth, and advancement of a country in every field. Although “development” often evokes economic development, it represents progress and growth in many areas from education to health. On the other hand, the negative effects of development continue to set our agenda, even if we don’t want that. Not a day goes by that we don’t hear news about the resources we consume in the world and in our country, and about hunger, poverty, epidemics, the climate crisis, and environmental disasters. We are witnessing the disappearance of world resources, which were once thought to be inexhaustible, one by one. We often come across news that the world will no longer be able to support human beings. The COVID-19 pandemic, the destruction of the Amazon forest, the potential melting of Arctic glaciers in a few decades, the rising seas where large parts of many countries may be flooded, the possibility of the climate crisis making the world uninhabitable, endangered animals, and nuclear power plant disasters in Chernobyl and Fukushima are just a few of these news stories. It is thought-provoking that all these negative news stories are related to the development process, which promises to provide us with all kinds of opportunities and is at the core of countries’ understandings of welfare. It seems like all countries agree on the same idea: Development cannot be abandoned! So, is it possible to minimize or eliminate the damages of development without abandoning it? This question has led to the emergence of some new concepts.

The understanding that does not see nature as a part of human existence but defines it as the “other” has brought the world to the brink of disaster. In essence, sustainability emerges as a concept that was introduced to restrain this unlimited growth and the understanding of development that continues with production as if trying to eradicate the world’s resources.
The understanding of development and continuous growth that emerged with the industrial revolution both stimulated the needs for consumption and justified unlimited production without recognizing any rules. Due to this understanding, which does not see nature as a part of human existence but rather defines it as “the other,” discussions began about keeping this unlimited production and consumption at a certain level toward the end of the 20th century. In essence, sustainability emerges as a concept that was introduced to restrain this unlimited growth and the understanding of development that continues with production as if trying to eradicate the world's resources. Statistics on how long resources in the world can be used often confirm this. From this point of view, sustainability aims to establish a world that is self-sufficient and sufficient for the future as well by creating a balance between nature and human beings.

**Sustainable Development**

While countries all over the world are trying to develop and industrialize rapidly, it can be said that the concept of sustainable development, which was put forward for the preservation of natural resources, aims to minimize the negative consequences that arise with the understanding of production and consumption without limitations. As a necessity of the free market economy, the developmental understanding based on constantly producing and earning inevitably ignores the protection of nature. This understanding of development, using the rapid production capacity obtained after the industrial revolution, has led to changes and major environmental disasters that harm the world’s ecosystem in every field, especially in the last quarter of the 20th century, due to technological progress. Even the current climate crisis has not been able to ensure that effective steps are taken to reduce the speed of production. On the other hand, many institutions and organizations, and especially the United Nations, have held conferences on sustainable development and prepared reports with striking statistics. Therefore, many institutions and organizations at the national level have also adopted sustainable development and prepared action plans accordingly.

Despite all these attempts, the psychological effects of the labeling that has been going on for many years still continue. The classification of the world’s countries as developed, developing, and underdeveloped has almost sanctified the concept of development. Fulfilling the dream of being a developed country that engages in continuous production and encourages consumption is among the biggest promises of countries to their citizens. On the other hand, developed countries bestow upon themselves the right to criticize the living standards of developing and underdeveloped countries in many respects with the reports they prepare. As a natural consequence of all this, developing countries do not care how much they are depleting nature in order to develop rapidly and raise their standards. Therefore, while rapid development efforts continue, it does not seem possible to eliminate the destructive effects of development. However, the situation is dire. The problem is that we are consuming not only our own portion of the earth’s resources today, but also what belongs to the future and future generations. On the contrary, we should be...
self-sufficient and leave a world that will be more sufficient for future generations.

**EDUCATION FOR SUSTAINABLE DEVELOPMENT**

Education is seen as the most important pillar for the realization of sustainable development. The concept of *education for sustainable development* that was put forward with this understanding aims to raise conscious consumers and to instill the awareness of protecting nature in young generations. In line with these goals, both formal and informal education is implemented. Recycling awareness efforts initiated in educational institutions and efforts to make recycling widespread throughout society are insufficient. It all comes down to not consuming, to consuming less, or, as the old saying goes, to being content with less. In a world where continuous consumption is supported by all the tools at the disposal of capitalism, the concept of education for sustainable development remains timely, although it may seem utopian. Accordingly, studies are continuing to design education at all levels to support sustainable development.

On the other hand, perhaps the biggest dilemma of modern education is that it was designed within a framework that supports development and the market unconditionally. In the modern school, the ideology of development and the market is promoted and it forms the core of the curriculum. It is predicted that individuals will be able to find jobs and continue their careers with the education they receive in accordance with this system. Therefore, the modern developmental understanding of education is gradually moving away from establishing a more just and humane order, unable to reveal the hidden potentials of individuals and not making an effort to enrich them morally. Unfortunately, it does not seem possible for a structure designed in this way to yield an infrastructure that will bring about sustainable development. We live in an era where education is at the disposal of the market. It would be naïve to hope for contentment and compassion and to expect a just world from an education system at the service of development because there is no opportunity to educate individuals to support sustainable development. Umbrella organizations and certain focus groups that support the developmental and market-oriented understanding do not want a world order that prioritizes people and puts them first.

As a result, the understanding of sustainable development has emerged in order to restrain the extremely competitive, continuous production and consumption-based patterns of development. This excessive-ness in development is actually reflected in the understanding of education. Academic achievement is taken as a basis for students to be considered successful. This shows that the same competitive approach in development is also present in education. Education has become a classifier, sorter, and labeler. Students do not pursue science and do not have curiosity. The expectation from education of generations that focus only on grades and degrees is nothing more than a means to a job, a source of income. It is a pity if the concept of education for sustainable development tries to make education a tool for development. However, adopting an ideal understanding of education that puts people at the center is closely related to giving the concept of education the value it deserves. We need to answer the following question: Is education for development or is development for education? Which one should shape the other? Of course, we prefer a human-oriented educational approach to shape development. There is a need for an understanding of education that will teach people to use their will and fulfill high social and moral responsibilities.

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Key to Sustainability in the Global Market: Standards and Standardization

In today’s economic system, possessing knowledge has a strong effect on production efficiency. This has become one of the main parameters affecting economic growth.
Today, goods and services, agents of production, technological experience, and financial resources can circulate freely between countries, and goods, services, and financial markets are increasingly integrated within this process. In this process, which ensures that all kinds of goods and services are produced in many different regions of the world and sold in many different areas, the way to be an effective actor is through the production of goods and services in accordance with international standards. With the increase in international trade, international standardization has inevitably become an issue of top priority on the agenda of all countries. Considering the rapidly developing Turkish industry and the exports and trade of Turkish industrialists on a global scale, and their contributions to our country’s economy, it is clear that we should attach importance to international standards and standardization.

While economic growth depends on factors such as capital and labor (workforce) in classical economies, these factors alone are not sufficient to predict or foresee the development of economic growth in today’s economies that are based on intensive knowledge. In today’s economic system, possessing knowledge has a strong effect on production efficiency. This has become one of the main parameters affecting economic growth. Although it is obvious that the technical developments in a country are instrumental in increasing the knowledge in that country, it is difficult to measure information quantitatively. However, there are a number of indicators proven to be useful in determining current levels of knowledge. Examples of some of these are the number of patents in a country and the license fees paid to foreign intellectual property owners. These indicators can be used to represent a country’s technical progress as a result of successful investments in research and development. Technical progress has a primary effect only when it is spread throughout the economy.

Standards are important economic tools that provide the necessary environment for technical knowledge to be disseminated throughout the economy. The increasing use of standards in a country or, in other words, the increase in participation in national or international standardization processes and the dominance to be achieved in this field will mediate the dissemination of technical knowledge to every field for that country. Thus, with increasing productivity in enterprises or industry, economic growth will come naturally.

While standardization and standards have the potential to remove many burdens on the economies of countries, they are also tools that have a positive effect on the growth of countries by causing an increase in productivity. In order for standardization to attain the place and value it deserves in our country, our national standards organization (Türk Standardları Enstitüsü: TSE)
Technologies are accepted as international efforts of different participants turn the much earlier than other enterprises. These information about these new technologies members of the committee get access to committees. Thanks to this process, other new technologies to standards preparation the global market.

At the same time, countries that ensure that their technologies are accepted as international standards gain a dominant position in the global market. Businesses that want to gain a competitive advantage by having the new technologies that they develop accepted by national, regional, or international standards organizations try to persuade them by presenting information about the new technologies to standards preparation committees. Thanks to this process, other members of the committee get access to information about these new technologies much earlier than other enterprises. These efforts of different participants turn the standardization process into the competition of different designs, the negotiation of these designs, and mutual exchanges of information. Therefore, developed countries consider standards as documents that provide technology, information transfer, and global market intelligence, and they try to play decisive roles in national and international standardization activities. Thus, as a country, we need to add standardization to R&D and innovation and put new policies into force in this regard. In this respect, it is not surprising that standards and standardization activities, which allow products to easily pass through borders in international trade and are almost like a passport, are among the strategic goals of countries, and especially developed ones.

A COUNTRY THAT SETS THE STANDARDS, NOT FOLLOWS THEM!
Standards constitute the international language of trade. Standards contribute to commercial communication between the buyer and the seller by strengthening the level of mutual understanding between the parties. Thanks to standards, the efforts of sellers to explain all the features of their products with technical details, to reveal the differences between them and competing products, and to explain the capacity of the product for meeting the buyer’s needs are simplified. In a world with no standards, it would be almost impossible for parties to agree with each other, especially in the face of today’s changing and varying products and service diversity.

Foreign trade is seen as the engine of economic growth. Today, foreign trade is among the prioritized policies of all countries, and countries implement various policies in order to increase their exports.

The main benefits of foreign trade are as follows:

- It enables countries to provide goods, services, and resources that they cannot produce at all or at a desired level.
- It allows the domestic market’s surplus products to reach new markets.
- It makes it possible to benefit from economies of scale since a larger market will become accessible through exports.

Developed countries have great advantages over other countries in foreign trade, especially in the exporting of advanced technology. Consequently, developed countries exert great efforts to liberalize world trade. They are creating a liberal global market through the World Trade Organization in order to liberalize world trade so that domestic producers can easily enter other countries’ markets and sell their products comfortably, and to remove the factors that hinder foreign trade, such as customs duties.

The World Trade Organization has adopted a policy of not implementing national standards in the presence of international standards. However, since developed countries are in a more effective position for setting international standards, standards and technical regulations in favor of developed countries play active roles in foreign trade. The facts that foreign trade has a significant role in economic growth and that standards have become the common language of foreign trade clearly show that standards contribute significantly to the growth of national economies through foreign trade.

As a result of the liberalization of foreign trade, tariff barriers such as customs tariffs and quotas cease to be, and new protection policies such as standardization and technical regulations, which are defined as non-tariff barriers, take their places. According to reports of the US Department of Commerce, 80% of world trade is affected by standards and technical regulations. Today, it is highly probable that this rate and its value have gone up much higher. In order to reach world markets, it is necessary to carry out production in line with standards. Nevertheless, it cannot be claimed
that the standards valid in foreign trade provide the same equality of opportunity for all countries. Since the prevailing standards are mostly the standards formed as a result of the standardization activities of developed countries, these countries have an advantage over other countries in terms of production in line with the standards.

Developed countries actively participate in standardization activities in order to maintain their superior position in world trade. When the participation rates of the International Organization for Standardization (ISO) committees are examined, it is clearly seen that developed countries pay great attention to this matter. For instance, while Germany actively participated in the work of 705 of the 745 technical committees established within the ISO, it also assumed a managerial position in 132 of these committees. Turkey, on the other hand, follows the work of 136 committees and has a say in the management of only 2 of them. Likewise, when the interest in the mirror committees (national technical committees) established by the TSE to convey the information obtained from studies carried out by our country’s business world, academic circles, bureaucracy, and all other parties relevant to international standard preparation institutions is compared with the technical committees of developed countries and the number of experts working for these committees, the interest seems quite low.

The contribution of standards should not be underestimated in terms of enabling our country to take a solid stance against all kinds of economic pressure and factors coming from inside and outside. The direct effect of standards and standardization on the GNP in developed countries is between 1% and 4%, and this ratio rises even higher with the consideration of indirect effects.

In order for standardization to attain the place and value it deserves in our country, we have to constantly remind industrialists and other stakeholders of these issues and create policies and targets that will ensure their active participation in these processes and the use of standards in their daily work. We are faced with the reality of needing to inform the ministries and rule-making authorities about these issues and guide them accordingly.

The key to our country’s strength in the global market is the TSE’s active participation in regional and international standardization organizations. Turkey should not be content with applying the standards de-
determined by developed countries to its own market; it should also contribute to the development of global standards that will enable world trade to be moved to a more fair and transparent environment, in line with its own production and consumption needs.

The TSE, as the national standardization organization of our country, exerts great efforts with the aim of directly involving our industrialists in this process by spreading standardization activities throughout the country and elevating our industrialists to an advantageous position in global competition by helping our country have a say in this field at the international level.

Thus, we should update our industrialization and foreign trade policies again, according to the requirements of the new industrial revolution, and standardization should be given the value it deserves in this process. In order to fulfill such an important task for our country, we expect the contribution and participation of all relevant parties in the standards development activities of the TSE.

Active participation in technical committee activities to be positioned for representation purposes in the short term and to be technical committee secretariat/president or working group experts in the long term, as well as having a say in the administrative bodies and managements of these institutions, would be a step forward for our country to achieve its strategic goal of attaining the status of a country that sets the standards.

In conclusion, under the coordination and leadership of the TSE, it is necessary to work with the following institutions and persons, and more generally throughout the whole country:

- Industrialists and our other stakeholders should particularly participate in international standardization processes in an active, effective, and sustainable manner.
- Universities and academics should conduct scientific field research on standards and standardization (strategic importance, economic importance, etc.) and carry out educational activities at undergraduate and graduate levels.
- Legislative and regulatory organizations should consider standardization as a policy (similarly to R&D and innovation) in determining country policies and strategies and should always be in a supportive position within the country with appropriate strategy documents.

In a world with no standards, it would be almost impossible for parties to agree with each other, especially in the face of today’s changing and varying products and service diversity.
Digital Games and Children

In studies on games, it has been seen that 81% of these games include at least one element of violence, while more than half of them contain elements of serious physical violence and death. In addition, many pornographic elements and examples of ethnic discrimination are found in games.
It is seen that the meaning and contents of “games,” as the most basic need and pastime of children, have changed as technology infiltrates our lives more and more every day. Games, which are children’s “occupation” in the most basic sense, have turned into digital time-consuming tools, and for adults, as well, in a way that has never been experienced before in history. When games are mentioned, interactions with virtual characters in front of a screen now come to mind instead of games that children play cheerfully in the streets.

Digital games, with an estimated 4.54 billion users around the world, are divided into three groups as personal computer games, console games, and mobile games. With all its by-products, such as consoles or head-phones, the market size of the game industry was expected to reach 180 billion dollars in 2021. Having first emerged in the 1960s, digital games continue to attract consumers with content that is produced according to the needs and interests of every age and income group today. Among the digital games that people of all ages can now access more easily, especially with the widespread use of mobile devices, there are millions of options that can be played online or offline in different genres and categories, from building games to cooking games and from sports games to strategy and war games. The game industry, in which Turkey is among the leaders in terms of both its producer and consumer potential, is considered an emerging market in the world in the area of Creative Sectors, and it is seen that the investments made in this field are increasing, game development laboratories are being established, and game design departments are even being opened in universities. Digital games are accepted as a type of sport with the name of e-Sports and children increasingly devote much time to these games in order to become e-Sports players and participate in digital game competitions from early ages.

It is known that the COVID-19 pandemic and quarantine practices that started at the end of 2019 also created huge demand in the digital game market. There are many reasons why digital games are so popular. They can be used to pass the time, have fun, socialize, and even make money. Furthermore, the successful use of the techniques applied in educational psychology within digital game settings is considered as another factor that increases the effectiveness of these games. Produced by professionals, these games have objectives of different difficulty levels and offer possibilities for active participation, feedback, and repetition. Since these games appeal to users of different knowledge and skill levels, they offer practice opportunities adapted to different levels. The external and internal motivators meant to develop desired behaviors are supported by concepts such as earning points, equipment, money, or power, along with the desire to reach higher levels and participate in competitions or challenges. In digital games, the levels become more and more difficult and the player is rewarded with a pass to the next level. In short, digital games are adorned with many options that will keep the interest and motivation of the player alive and prolong the playing time.
**RISKY CONTENT**
Digital games can be used effectively in education and for the acquisition of desired behaviors or concepts. It is known that games can be beneficial for certain things such as hand-eye coordination, attention, and spatial skills. However, the content of online games constitutes a field that needs to be examined on its own. In addition to extreme examples that caused the death of many children, like the “Blue Whale Challenge,” ordinary or innocent-looking games also contain many risks for children. In its report entitled “The State of the World’s Children 2017: Children in a Digital World,” UNICEF outlined the risks that children face in digital environments under three headings:

1. **Content Risks:** Children may be exposed to inappropriate content. Platforms may suggest unhealthy and dangerous behaviors with violent, sexual, pornographic, racist, discriminatory, etc. contents. In digital games, contents are available to all users without any age restrictions or censorship; although an age level may be specified for some digital games, age restrictions cannot realistically be applied, especially for mobile games.

2. **Contact Risks:** The child’s participation in risky content may also entail contact with people who may harm them. In particular, with the option of sending private messages in games that came to the fore with the “Blue Whale Challenge,” children can directly communicate with people they do not know.

3. **Conduct Risks:** Situations may arise where the child behaves in a way that contributes to risky content. This is the case in the cyberbullying of other children in ways similar to the content that children see in the digital environment.

In studies on games, it has been seen that 81% of these games include at least one element of violence, while more than half of them contain elements of serious physical violence and death. In addition, many pornographic elements and examples of ethnic discrimination are found in games. In such games, violence, sexual content, erotic elements, pornography, hostility, killing, wounding, robbery, theft, gambling, abusive words and discourses, and even racist approaches are present, intertwined, and uncensored. In digital games with contents of war and adventure, violence is presented in its most realistic and brutal form as a requirement of the game. It is seen that racist elements are included in many games, with black people presented as poorly dressed criminals while white people are presented as well dressed and wealthy. In these games, women are usually weak, side characters or sexual objects, while sexual acts can be accessed without censorship. An example of this is the “Grand Theft Auto” game that even little children have played for a while. These games are also used to convey certain ideologies and cultures. The placement of symbols and discourses belonging to certain views and beliefs in games is also a matter of discussion.

**PROMOTING VIOLENCE**
The violent content in these games, created by professional companies and with state-of-the-art image technologies, is exactly the same as in simulation trainings used by professional armies. Similar war game simulations, for which huge investments have been made, are increasingly used in military training in many countries and it is seen that...
they have increasing effects on military success. This situation raises many concerns and allegations about children playing such games. Similarly, as a result of the discussions and research on children who commit mass murder, especially in school shootings in America, these games cannot be directly associated with committing a crime, but it is seen that the children who are perpetrators of such crimes have received virtual training by playing such games for a long time.

In digital games, crimes are presented as a requirement of the game and are shown as a justified tool to achieve success. Violence becomes ordinary and innocent through online games that millions of children play for the purposes of passing time, relaxing, and being entertained, but these games can turn into an addiction over time.

DIGITAL GAMES CAN CAUSE BEHAVIORAL AND PHYSIOLOGICAL PROBLEMS
It is observed that playing digital games for a long time may cause physiological problems such as deterioration of the musculoskeletal system, eye health, or sleep quality. In addition to these effects, violent video games might particularly hinder children’s positive behavioral development skills, increase aggressive behaviors, weaken social communication and empathy skills, and create indifference toward the pain of others.

The negative effects of such games on the children that play them are stated as follows:

- They cause aggression, increased tendency to violence, restlessness, and social behavior problems.
- Young children, who have difficulty in distinguishing between the real world and the virtual world, show a desire to try and practice their in-game conduct in the real world.
- These games lead children to perceive their environment and the world as being more fearful and to take measures to protect themselves by carrying weapons or sharp objects. In this case, virtual violence is transferred to real life.
- They cause insensitivity and indifference toward violence or the victims of violence around them.

- In addition, they increase the desire to obtain and watch more violent material.

Game addiction, which is defined as prioritizing games over other interests and daily activities, continuing to play games despite negative consequences, and experiencing these effects for more than 12 months, causing emotional and social problems, was included in the category of mental disorders in 2018 by the World Health Organization.

There is a large amount of data on the relationship between games containing violence and gambling and game addiction and behavioral problems. Studies reveal that boys are more interested in and addicted to digital games than girls. On the other hand, it has been observed that children of high socioeconomic levels have easier access to digital tools and contents, increasing their levels of addiction.

The negative effects of digital games largely threaten children and young people. According to TURKSTAT data, children aged 0-17 constituted 27.5% of Turkey’s population in 2019. Again according to TURKSTAT data (2013), 60.5% of children aged 6-15 use computers, 50.8% use the internet, and
24.3% use mobile phones. While 84.8% of children stated that they used the internet for homework or learning purposes, that was followed by playing games at 79.5%, seeking information at 56.7%, and participating in social media networks at 53.5%.

Today, the social structure is going through serious changes and transformations and families have a serious task in protecting their children from the harms of digital games. In addition to establishing a strong social and emotional bond by taking care of their children and being closely involved in their development, it is important for parents to:

- Not give devices such as tablets and phones to children as gifts, especially at early ages.
- Talk to their children about the content of digital games and guide them to choose educational and entertaining games with appropriate contents.
- Discuss the contents of games with their children and help them understand the differences between virtuality and real life.
- Monitor their children for game addiction.
- Ensure that the children play their games on a screen with dimmed brightness in a well-lit environment, staying as far away as recommended from the screen, and make sure that they take breaks at certain intervals when they get tired.
- Keep their playing time defined and limited, allowing them to play only after their daily responsibilities are fulfilled.
- Direct children to different activities where they can spend their free time and socialize.

Various resources have been prepared to inform families about digital content. In Turkish, for example, Çocuk İçin İçerik (www.cocukicinicerik.com), Güvenli Çocuk (http://www.guvenlicocuk.org.tr/), and Farkindayız (https://farkindayiz.gov.tr/) can be accessed to get assistance in choosing game contents suitable for children.

Game addiction, which is defined as prioritizing games over other interests and daily activities, continuing to play games despite negative consequences, and experiencing these effects for more than 12 months, causing emotional and social problems, was included in the category of mental disorders in 2018 by the World Health Organization.

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The Relationship between Sustainability in Development and Life-long Learning

Sustainable development depends on the existence of individuals who have an awareness of the concept. In societies in which lifelong learning and teaching is adopted, the awareness that sustainability could be provided with the preservation of the natural environment is strengthened, and this awareness becomes a lifestyle.

In the globalized world, which is being industrialized due to scientific and technological developments, in which urbanization increases unequally, fossil fuel consumption causes the destruction of nature, and the speed of consumption has surpassed the speed of production, the greed for more production to earn more money has caused the rapid depletion of natural resources by increasing competition between countries. The rapid consumption of natural resources has brought about many global issues such as famine, energy deficiencies, epidemics, climate problems, and the destruction of the environment. For the permanent solution of these issues, countries have conducted numerous studies locally, regionally, and globally. After discussing how environmental issues have reached substantial levels, these studies concluded that the process of seeking solutions should be global. Following these studies, states made significant modifications in their development plans for the solution of these global issues.

Among the modifications that states have made in their development plans are modifications in the education field. It is obvious that education should be reorganized to solve global issues in an effective and efficient manner and to permanently sustain the applied solutions. What is meant by the reorganization of education is that all knowledge, thoughts, and values obtained from preschool to higher education should support the whole process as instruments and objectives for a habitable and sustainable world. In addition, raising public awareness and sensitivity on the consumption of natural resources through lifelong learning has an important place in the solution of global issues.

EDUCATION FOR SUSTAINABLE DEVELOPMENT

It is important for sustainable development that the definition of education be understood. In order to ensure the balance between sustainability and development, the focus in education should be placed on raising public awareness for using resources productively and not posing a threat to natural resources with our consumption habits. It is important that awareness of the environment, society, and economy be provided in a correct and effective manner. The path toward correct and effective maintenance of awareness, which should begin in the family and last throughout years of lifelong learning locally, regionally, and globally, depends on the exposure of society to powerful and sustainable curricula applied by educators with high awareness of the environment, society, and economy. Universities bear a tremendous responsibility in integrating these educators with high awareness of the environment, society, and economy into society. Universities play an important role in increasing awareness of the efficient use of natural resources in meeting the needs of today's people without jeopardizing the needs of future generations and developing knowledge and technology. In societies that adopt lifelong learning and teaching, awareness of the environment and hence awareness of agriculture, finance, interna-
The path toward correct and effective maintenance of awareness, which should begin in the family and last throughout years of lifelong learning locally, regionally, and globally, depends on the exposure of society to powerful and sustainable curricula applied by educators with high awareness of the environment, society, and economy.
It is obvious that a single discipline alone cannot provide an effective and efficient solution to complex global issues regarding sustainable development. It is imperative that interdisciplinary approaches be used to resolve global issues. Interdisciplinary approaches, as innovative educational approaches, utilize different disciplines in an integrated manner for understanding and solving global issues. At this point, a good understanding of what the holistic use of different disciplines entails is an important step in the efficient and effective solution of global issues.

The integrated status of different disciplines is explained in the literature in two ways as being multidisciplinary or interdisciplinary. In a multidisciplinary approach, it is expected that the topics pertaining to each discipline are learned separately and the disciplines are correlated with each other in the process of solving problems. In an interdisciplinary approach, on the other hand, the topics pertaining to each discipline are learned in an integrated manner and clear boundaries between the disciplines are not emphasized. This kind of learning would enable the development of individuals who can understand global problems from multiple perspectives and assess these issues from different points of view. Therefore, an interdisciplinary approach to global problems would allow efficient and effective solutions by ensuring the holistic use of different disciplines.
Urie Bronfenbrenner and Ecological Systems Theory

“Young plants will grow when a good and accurate combination of sunlight, water, and nutrition is provided. Similarly, children and youngsters will develop, be supported, and learn best when they study with the individuals in their lives, and when they support each other. The connections and relations between different environments and individuals (i.e. home and school, teacher and parents) are important for development and learning” (Bronfenbrenner, 1979).
The structure of a child's ecological environment should be considered as a nested organization of structures, each of which is contained by the next.

The theory considers the development of a child regarding systems of relations that constitute the environment of that child. In Bronfenbrenner's theory, complex environmental "layers" are defined, each of which has an influence on the development of the child. This theory has been recently called "bioecological systems theory" to highlight that the biology of the child is the primary environment nurturing development. The maturing biology of the child and the interactions between the factors in the close family and community environment nurture and orient the development of the child. Any alterations or conflicts in any layer will reflect on other layers. Therefore, not only the child and his or her close environment but also the wider environment should be examined to investigate the development of the child.

The layers of ecological systems theory are as follows:

**Microsystem**

Microsystems are defined as environments in which participants with certain physical characteristics are present at certain times doing certain activities in certain roles (boy, girl, etc.) and in interaction with certain objects. Place, time, participants, activity, and role factors constitute the elements of the environment. The microsystem is the layer closest to the child and it contains structures with which the child has direct contact. Microsystems include the family, school, and peer groups. There are greater cultural, economic, and political powers subsuming these environments of influence.
ence his or her parents’ beliefs and behaviors. Bronfenbrenner describes this dynamic as two-way effects and shows how such effects occur between all environmental levels. At the microsystem level, two-way effects are the strongest, and they have the strongest influence on the child. On the other hand, interactions at the outer levels can also influence the internal structures. The interactions between the structures in a layer and the interactions of the structures between layers are the foundations of this theory.

**Mezzosystem:** These systems contain the mutual relationships between the main environments that include the individual, who is at a certain point of life and whose development is ongoing. While for some children the mezzosystem typically encompasses the interactions between the family, school, peer group, and television, it may also include the interactions between differentiated systems such as religious places, camps, or workplaces.

The mezzosystem provides the connection between the structures of the child’s microsystem.

**Exosystem:** This is an extension of the mezzosystem, which affects or includes the close environments incorporating the individual, thus affecting, limiting, and even determining the situations in those environments, and which contains both official and unofficial structures. These systems are abstract and they contain both deliberately structured and autonomously developing main structures of the society. As much as anything else, they encompass professional life, the neighborhood, mass communication tools, government agencies (local and national), the distribution of goods and services, communication and transportation facilities, and unofficial social networks.

The exosystem implies a larger social system, in which the child does not function directly. At this level, the child feels the positive or negative power that these systems contain, although he or she does not get involved directly and is affected implicitly.

**Macrosystem:** The macrosystem can be understood as the outermost layer in the child’s environment. This layer is composed of cultural values, traditions, and law, although there is not an exact framework. The larger phenomena defined by the mac-

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According to Bronfenbrenner, the existence of humans is mostly affected by the ecological systems in which they exist and the interactions of those systems. The most powerful environments are made up of close living spaces, such as the family, school, and peer groups.
rosystem have gradual effects throughout the interactions of all other layers. Macrosystems comprise the inclusive institutions of a culture such as economic, social, educational, legal, and political systems, which are the concrete manifestations of other systems. These types of macrosystems are not designed and investigated in only structural terms, but also as carriers of information and ideology that provide sense and motivation, both explicitly and implicitly, to certain institutions, social networks, roles, activities, and their mutual relations. It is important to determine whether the children, parents, students, teachers, or other people directly involved in the learning process have any place or privilege in these macrosystems, how these people are treated, and how they interact among themselves.

**Chronosystem:** This system accounts for the time dimension of a child’s environments. The elements in this system can be external states, such as the effects at the time of the death of a parent, or physiological changes due to growing older. However, children can have different reactions to environmental changes as they grow older, and they can determine how those changes can affect them. The chronosystem contains such elements that are related to time.

Bronfenbrenner’s theory is acknowledged as an instrumental framework in child development studies by psychologists, sociologists, and teachers. His ecological systems theory considers child development as a complex system of relations, which is affected by the different layers of the environment that surrounds the child, from close family and school environments to wider cultural values, laws, and traditions. Therefore, not only the child and his or her close environment but also the interactions of the wider environment should be investigated in considering child development.

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In Bronfenbrenner’s theory, complex environmental “layers” are defined, each of which has an influence on the development of the child. This theory has been recently called “bioecological systems theory” to highlight that the biology of the child is the primary environment nurturing development.
The land of Mali hosted a rich and powerful empire in the 13th and 14th centuries and experienced the most brilliant period of its history. The name of the country was inspired by the historic Mali Empire that ruled in these lands and the Mandinka people who lived in the empire.
West African country of Mali, which has rich underground resources, is a country that we have strong ties with both historically and culturally. Mali, now looking at the future with hope with its young population, hosted a rich and powerful empire in the 13th and 14th centuries and experienced the most brilliant period of its history. The name of the country was inspired by the historical Mali Empire that ruled in these lands and the Mandinka or Malinke people who lived in the empire. The word “mali” means “hippopotamus” in Bambara, one of the languages spoken in the country.

Mali’s history dates back approximately a thousand years. Burial chambers and obelisks scattered around the Niger River and the Tellem caves carved into the cliffs of Bandiagara support this view.

Ibn Khaldun and Ibn Battuta provided information about the Mali Empire, founded on the banks of the Niger River and embedded in history since the 11th century. The book Tarih es Sudan (“History of Sudan”), written in the 16th century, also mentions the history of Mali as being full of resistance and battles.

In the 15th century, the city of Timbuktu, founded at the crossroads of the Mali Empire and its trade routes, became a rich imperial city and a cradle of science and wisdom, where Islamic religion and culture were taught. Timbuktu, home to almost 20,000 historical manuscripts, was added to the list of UNESCO World Heritage Sites.

The present-day Mali Republic was formerly a part of three different Western African empires: the Ghana Empire, Mali Empire, and Songhai Empire. Towards the end of the 19th century, Mali was put under the French Mandate and become a part of French Sudan. In 1959, Mali gained independence as the Mali Federation together with Senegal.

In addition to French as the official language of Mali, other ethnic languages such as Bambara, Soninke, Fulani, and Songhai are spoken in the country. Although local beliefs continue to exist in the country, 90% of the population is Muslim.

**GEOGRAPHICAL INFORMATION**

The average altitude above sea level of the country is 343 meters. The highest point is Mount Hombori (Hombori Tondo) at 1,155 meters. The lowest point of the country is the Senegal River at 23 meters.

Mali is the 8th largest country of the African continent with a surface area of 1,240,000 square kilometers. It shares borders with Algeria, Burkina Faso, Côte d’Ivoire, Guinea, Mauritania, Niger, and Senegal.

The northern borders of Mali, which comprises eight separate regions, extend to the middle of the Sahara Desert. In the southern region, where the majority of the population lives, there is a large basin surrounded by the Niger River and Senegal River.

There are about 25 ethnic groups in Mali, which has a young population. Among these groups, the Bambaras account for
33% of the population, while the Malinkes, Soninkes, Mandes, Peuls, Voltaics, Songhais, Tuaregs, and Moors are other major ethnic groups.

Due to the Sahara Desert in the north of Mali, 70% of the population lives in the south of the country, in fertile lands close to the Niger and Senegal rivers. The economy of Mali, which is among the 25 poorest countries of the world and which does not have any access to the sea, is based on gold mining and agricultural exportation.

With Mali having realized $2.86 billion exportation and $3.6 billion importation, the country ranks 20th among the 47 sub-Saharan countries regarding economic size.

Eighty percent of the working population of the country is employed in agriculture and fishing, while 65% of the lands of the country are desert. The major agricultural products are grains, rice, cotton, peanut, sugar cane, and various fruits and vegetables.

Although the country has underground resources such as bauxite, gold, iron, copper, nickel, phosphate, manganese, uranium, lithium, limestone, and salt, only the local resources of salt, iron and gold ore, and limestone can be produced.

**TRAVEL GUIDE**

Mali, which had a significant role in the spread of Islam in Africa, is home to a history and cultural heritage with a 1000-year past. We have assembled a list of places to visit in Mali.

**Bamako**

**National Museum:** A small museum hosting numerous sculptures and masks reflecting Western African culture. One can see many cotton and silk fabrics produced on weaving looms and colored with ochre and madder.

Masks, wooden sculptures, and doors reflecting the most beautiful samples of African art are produced by the people settled in this region. The oldest of these wooden sculptures and masks, which create a primitive effect and pertain to the Tellem culture, formerly present among the cliffs of Bandiagara, are rare artifacts that have remained undisturbed until today, covered with a material obtained by mixing corn flour and blood.

**Medina Koura Bazaar:** In this marketplace, which is also called the Pink Bazaar, one can watch African artisans and witness heated exchanges.

**Djenne**

In Djenne, one can find architectural works depicting surreal imagery with an unprecedented architectural style.

**Mosque:** The adobe Djenne Mosque, the construction of which started in the 12th century as a palace, and which took its current form in 1907, is included in the UNESCO World Heritage List and is the most striking architectural work of Africa, with dimensions of 65 meters by 75 meters distributed across 100 square columns, allowing 50,000 people to perform their prayers, and constructed completely from adobe with conical minarets.

This architectural masterpiece, constructed with cylindrical adobe units called “banco” in the “Sahel Sudanese” style, is placed on square adobe columns with an almost square plan, and it has both conical and helical minarets. The construction was realized with the installation of hundreds of wood pieces on the adobe walls, also functioning as a scaffold for the repair of structures that wash away after the rainy season. The most important ornamental elements of these plain structures, which do not have any decorative features or ornamental elements, are these wood pieces that function as a scaffold.

**When to visit Mali?**

As summer in the northern hemisphere coincides with the rainy season in this country, it is not ideal to visit in summer. The most favorable times are December, January, February, and March. If travelers can align their travel plans with the Desert Festival held in Timbuktu in January and the Music Festival held in Segou in February, they will be able to witness marvelous festivities.
Marketplace: The bazaar set up in front of the Djenne Mosque every Sunday enchants visitors with its peerless colors and splendid smells.

Streets and houses: The streets of Djenne, with its texture composed of completely adobe buildings resembling Anatolian Hittite civil architecture and narrow alleys, makes one feel as if wandering in a labyrinth.

Cliffs of Bandiagara: These cliffs are the starting point of the short journey to the Dogon tribes. There were Tellem settlements in the caves of the cliff, which are listed in the UNESCO World Heritage List.

Dogon villages: These villages, all of which are situated under the Cliffs of Bandiagara, are a frequent destination for photography enthusiasts with their animistic lifestyles and mask ceremonies.

The Dogon deity statues, for organized religious rituals when the star known as Sirius appeared in the sky, teach us about the Dogon culture and have both female and male characteristics, while the “Kanaga” masks that represent fertility and entreaties to the heavens are the best examples of Malian art. These artifacts were created to satisfy the mighty gods Amma, Lebe, and Nommo. Doors and blinds ornamented with the same Kanaga masks and Dogon statues continue to be crafted by Malian artisans.

Timbuktu

Specialized libraries containing Islamic manuscripts: Timbuktu, which hosts thousands of valuable manuscripts of the 12th century, is trying to recuperate after many years of unrest with UNESCO’s support.

Houses of the Explorers: Houses of Ibn Battuta, Renne Ceille, Alexandr Gordon Laik, and Heinrich Baht have all been transformed into museums.
A friendly and brotherly country in West Africa:

MALI

I would like to first express my gratitude to our Malian friends who are reading these lines for their hospitality. The people of Mali are always ready to share their food and to visit in both the happiest and most mournful days to provide their support. I am pleased to fulfill my duty in these lands that are distant from Turkey geographically but close at heart, with which we share the same religious traditions, and which hosted a great empire at one time.

MALI IS A COUNTRY THAT CONTAINS GREAT CONTRASTS IN ITSELF

This country, although it has no enemies, has lost thousands of citizens to the activities of radical terrorist groups and inter-community conflicts. Although Bamako, where I live with my wife, is among the safest capitals of the world, it is not possible to travel to a large portion of this country. The country lives in squalor, although it was once run by Mansa Musa, the richest person in the world at his time, and it is the third largest gold producer of Africa.

TURKEY IS NOT A NEW ACTOR IN AFRICA OR MALI

As can be understood from the statements of some Malians that their grandfathers had been appointed viceroys with the approval of Istanbul, the Ottoman empire was quite influential in the region until the colonial period. The African continent has a special place in the hearts of President Erdoğan and the First Lady. Our President has visited many African countries to date. Many of these visits were the first visits paid at this level by the Republic of Turkey. As a result of President Erdoğan’s special interest in Africa, our relations with Mali have made substantial progress in this period. During a visit to Mali by a Turkish delegation, the First Lady laid the foundations of the African House, in which women of the continent could exhibit their handicrafts, as support for the humanitarian aid activities conducted for the people of the region.

Africa is one of the geographical areas that has the highest potential regarding Turkey’s entrepreneurial and humanitarian foreign policy. Thus, at the Turkey-Africa Partnership Summit held in 2008, Turkey was declared a “Strategic Partner,” and the African Initiative Policy, which had continued since 1998, gave way to the African Partnership Policy in 2013. With the second summit held in Malabo in 2014, Turkey’s relations with the African Union have also been institutionalized. On the occasion of a new summit, our initiatives to welcome African state and government leaders in Istanbul will be ongoing.

MALI HAS A SPECIAL PLACE FOR TURKEY

With the visit of Mr. and Mrs. President to Bamako on March 2, 2018, a series of conventions were signed that opened new doors for improving our relations in all areas.

As a large part of trade with Mali is conducted via third countries, it is known that Turkey’s annual trade volume with Mali is much higher than the official figure of 112 million dollars. A daily flight by Turkish Airlines that connects Bamako to the world and the presence of Aksa Energy, one of the biggest electricity producers of the country, are foundations of Turkey’s increasing economic weight in Mali. In addition to these major establishments, numerous Turkish companies investing in Mali contribute to the growth of economic relations between the two countries.

Numerous Turkish NGOs undertake very important missions in Mali, running schools and orphanages, drilling wells, building healthcare centers and mosques, and contributing to the strengthening of the sense of brotherhood between the peoples of the two countries. A TİKA office becoming operational soon will undoubtedly accelerate these operations of Turkish NGOs. Our initiatives concerning these issues are ongoing.

MAARIF SCHOOLS ARE A LIGHT OF HOPE

The healthy high-level political dialogue between these two countries has yielded results in our struggle against FETO, our most important priority, and the schools under control of this terrorist group were transferred to our nation.

The Mali Maarif Schools, which constitute the most important asset of the foundation in Africa, held an education workshop with the participation of about 50 representatives from the Africa-2 (Francophone) region between September 3rd and 9th, 2021. I would like to state that the senior officials of the Maarif Foundation, with whom I became acquainted both in previous visits and during the workshop, have made a favorable impression on me with their humble and intellectual personalities.

The assignment of an Education Attaché to our Embassy will advance our activities in education further by diversifying these activities and will contribute to providing better services to hundreds of Malians receiving education in Turkey.

I would like to take this occasion to express my gratitude to Mr. Coşkun Yılmaz, the Maarif Foundation Mali Representative, and all members of Maarif, who work heartily in this difficult region, often with their families, for their support of our Embassy and our citizens.
Turkish Maarif Foundation in Mali

The authority of the TMF for conducting education and training activities in Mali, and to open and operate schools, began with the approval of the relevant ministries and institutions on August 26, 2017. The Turkish Maarif Foundation, as the strongest representative of cooperation in education, has accelerated its activities to contribute to the development of cultural relations between these two countries and to the construction of Mali’s future via high-quality educational opportunities, and it has become one of the most prestigious educational brands of the country in a very short time.

The foundation started its activities in the 2017-2018 academic year with 21 schools on 5 campuses and 2400 students. As of the 2021-2022 academic year, the foundation is providing education in Mali to over 4000 students in 30 schools.

UNDER NATIONAL SUCCESS, THE MAARIF SIGNATURE

As in every country, in Mali the Maarif Schools conduct their educational activities in line with the national curriculum of Mali. The schools have made their mark in a short time with their success at the national level. In the Mali National Baccalaureate Examination, Turkish Maarif Foundation students achieved phenomenal success, and the runner-up was among the students of the foundation. Three students took the Concours d’Excellence Examination, in which the top 15 students of the Baccalaureate Examination participate, and in that exam the first, third, and fifth top results were obtained by Maarif Foundation students. The foundation’s schools obtained almost 100% success in the high school entrance exam and 85% success in the Baccalaureate, the examination for university entrance. In the Epelle-Moi French spelling competition, in which Maarif Schools in Mali, one of the most important countries of West Africa, make their difference in education quality felt with each passing day and carry out a crucial function for the future and development of the country.
all schools in Mali participate every year, our students ranked first in 2018, second in 2020, and first in 2021 again.

SOCIAL AND CULTURAL ACTIVITIES

Maarif schools won the girls’ high school handball competitions in 2020, organized by the Malian Ministry of Sports. In 2021, the primary school students competing on behalf of Mali in the TRT April 23rd Music Competition ranked among the top 10 countries to make it to the finals, and these students received a special TRT award. The Robotics Club of the Malian schools was entitled to participate in TEKNOFEST with two projects; however, they could not come due to COVID-19 restrictions.

In Maarif schools, emphasis is given to workshop and club activities for students to become individuals who transform information to skills. In this context, activities to improve students’ skills are conducted via the Robotics Club, Archery Club, Karate Club, Environment Club, Art Club, Music Club, Football/Basketball Clubs, and workshops for drawing, dancing, music, handicraft skills, Turkish language/Turkish culture, and intelligence.

To help the students in career planning, career days were organized and our students were introduced to experienced individuals from many areas of business, sports, and arts. Places such as dams, gold mines, electric plants, Turkish Airlines offices, and the airport were visited.

In 2019, an education exhibition was organized with the participation of universities from Turkey, and many participants visited the exhibition.

In 2021, the five-day-long Africa-2 Education Workshop was organized with the participation of officials from all Maarif schools in the Africa-2 region.

In order to introduce and implement the Maarif Foundation’s kindergarten curriculum, a five-day Kindergarten Curriculum Development and Introduction Program was organized with 70 participants.
A New Paradigm in Education: Intellectual Humility

Intellectual humility helps us to overcome answers given as egocentric information or information without hard evidence. Such an approach urges us to explore and evaluate ideas and information in order to be less affected by our own instincts and to orient ourselves more toward searching for truth.
The world is in a transition period that proceeds at an overwhelming speed. While Turkey faces the effects of this transition period, all countries have sped up their processes of institutional change to keep pace with the current changes. It is obvious that this tsunami of change that affects cultural, economic, social, and political life as a whole is also shaking the foundations of educational processes, including all learning and teaching processes. In this new era, finding new answers to a series of old questions from curriculum issues to school preferences and from teacher-student relations to the digitalization of education has become an issue concerning not only the stakeholders of educational systems but also decision-makers at all administrative levels. What kind of educational format will be provided for new generations is among the vital issues here.

To put it briefly, in the period framed as a time of cultural conflict, one of the most important social actors is undoubtedly the generation born after 2000, called “Generation Z.” The oldest memories of world-changing events of this generation, the oldest of whom are in their mid-twenties, can be dated back to 9/11 at most. This generation has many aspects to be admired with regard to their interest in matters such as social justice. They allocate their time to critical environmental, racial, and generational issues that affect the world. On the other hand, it is seen that this generation is afraid of ostracization due to the social media culture they are exposed to, closely related to their educational processes. This culture of destruction, in which everyone is discredited and alienated in the context of “Cancel Culture,” is said to be most influential for young people, causing behavioral disorders among the youth, who are afraid of being ostracized or discredited, especially in school and classroom environments. While the most intriguing question here is how the education world will reply, a counter-narrative is being built around the idea of intellectual humility.

**WHAT IS INTELLECTUAL HUMILITY?**

To establish this issue more clearly, the prevalent behavior among young people that requires immediate intervention is related to a culture that is eager to ostracize and discredit, as well as a culture that is afraid of being ostracized. While the highest rate of ending friendships due to differences of identity is found among Generation Z, the environments in which the effects of ostracization due to differences in identity and culture are most destructive are the classroom, the school, and dormitories. While the alienation of a middle-aged person from daily life is also an essential issue, it does not allow us to understand the psychology of a young person who is ostracized by a whole classroom or dormitory. The damage caused for young people by this state of being outcast by peers can trigger many psychological problems, affecting everything from learning processes to self-expressions. Thus, a new norm and behavioral code, from epistemic fallibilism to the practice of taking counter-views seriously and related to the search for the truth, is being constructed based on the concept of intellectual humility.

While researchers have not established a consensus on the definition of intellectual humility, the concept is addressed in the contexts of personal traits, cognitive tendencies, certain control-related habits, and intellectual virtue or lack of intellectual defects. In this regard, while intellectual humility is sometimes defined as a general trait that orients people’s reactions to evidence, it is also sometimes defined as a means to control the answers that people give to a certain idea or information. In this respect, certain common aspects of the concept are revealed despite the differences in definitions in the literature. Reviewing our answers to new and distinct ideas and information in public spaces while respecting other people’s thoughts, avoiding conflict when challenged, and being disposed to lessen the need to appear infallible are at the center of this concept. It has an aspect that corrects the natural tendency of prioritizing one’s own needs along with being sensitive to adversarial evidence, having a realistic point of view, striving for truth, and having less anxiety about self-regard. In summary, intellectual humility helps us to overcome the answers given as egocentric information or information without hard evidence. Such an approach urges us to explore and evaluate ideas and information in order to be less affected by our own instincts and to orient ourselves more toward searching for truth.

Intellectual humility has an aspect that corrects the natural tendency of prioritizing one’s own needs along with being sensitive to adversarial evidence, having a realistic point of view, striving for truth, and having less anxiety about self-regard.
INTELLECTUAL HUMILITY IN EDUCATION

Intellectual humility in education involves respecting opposing views and different identities as well as the desire and awareness of individuals to acknowledge their own intellectual limits and defects. With respect to actors, intellectual humility can be addressed within a wide network of relations, from teacher-student relations to the relations of students with their peers and parents. For instance, a teacher with intellectual humility will not be afraid of acknowledging something he or she does not know or a mistake he or she has made, and he or she will exhibit supportive behavior for any lack of knowledge or difficulty in comprehension among students, who are new learners in comparison to the teacher. An intellectually humble student is also aware of the gaps in his or her knowledge compared both to peers and teachers and the tendency to struggle intellectually. Such a student will not resort to ignoring his or her own deficiencies and limitations. On the contrary, such students freely acknowledge those and know that doing so will help them develop intellectually. Respect for peers with different identities and views arises from self-confidence. Students with a strong sense of self-value to the extent of being comfortable with their own identities and their education and acknowledging their own struggles and failures will not be afraid of what others think about them and will not try to manage perceptions of themselves at the micro level. The student who does not have any interest in conflict, status, or vengeance is free to be himself or herself, and that is real humility.

POSITIVE OUTCOMES OF INTELLECTUAL HUMILITY

It is accepted that intellectual humility positively affects questioning and learning processes above all else. There may be many obstacles before developing a perspective about an opposing view in cases of having little knowledge about a topic or the inability to think from a certain point of view, which is also called the “Curse of Knowledge.” The virtue that reduces those prejudices that prevent one from gaining perspective and that enables alternative perspectives is not intellectual arrogance but rather humility. It is also asserted that intellectual humility can help people know when to listen to experts, also known as “proper dependency.” Proper dependency allows for support with a non-egocentric approach, since it enables individuals...
to become aware of the differences between the things they know themselves and the things they know in relation to others.

Another educational benefit of intellectual humility is undoubtedly that it increases the capacity for respect between identities with a possibility of conflict. Since ego-defending reactions could be oriented toward belittling, humiliating, and even ostracizing people from group membership, it is a fact that individuals with higher intellectual humility could interact more positively with people from different backgrounds. The limits of such tolerance are not determined; however, it is thought that this would help people in overcoming what Freud called the "narcissism of small differences." Considering today’s societies, in which political and cultural debates can transform into ever-increasing fragility and polarization, it can be easily predicted that intellectual humility will be a central topic for prospective studies. The fact that intellectual humility, which improves well-being, increases respect for other perspectives, and encourages questioning and learning, has the benefit of promoting welfare and growth has become one of the important topics of the debates about social change.

CAPACITY-INCREASING STRATEGIES
It is argued that increasing intellectual capacity, especially in the context of education, is related to building positive classroom environments above all else. In this respect, it is emphasized that classrooms should be designed following the "what happens here stays here" principle to remind students that the classroom is an intellectual laboratory instead of a place to find and expose differences. It is thought that this would give confidence to students in expressing their actual ideas and in debating the strongest claims of those with opposing views. Secondly, it is stated that proper expectations can be supported with semi-official rules to achieve expected behaviors. While many colleges and universities around the world have rules that prohibit any member of the community from harassing or bullying any other community member due to differences in perspective, it is emphasized that it will not do any harm to clearly remind students that the flawed or developing thoughts of their peers are not a reason for retaliation or embarrassment. Lastly, based on the fact that strong communication is the sum and substance of democracy and requires the infinite exchange of ideas, it is suggested that all instructors be involved in training programs related to this topic. In this respect, the literature and training programs on this topic are already growing.

Consequently, democratic culture can only survive if individuals accept that they might be mistaken and if they have a safe debate environment. From this perspective, considering the sudden increase of different social, political, and cultural groups losing their patience in response to the inevitable flaws that arise from change, it is observed that the need for intellectual humility is of urgency.
ASELSAN is one of the most powerful establishments behind Turkey’s development, especially in military technology... A planning vision that prioritizes sustainability and the potential of qualified personnel are behind the success of an establishment like ASELSAN. We conducted an enlightening interview with Prof. Dr. Haluk Görgün, Chairman of the Board of Directors and General Director of ASELSAN, one of the most experienced institutions of our country in terms of sustainable development, about sustainability, education, and high-quality human potential.

CALENDAR
ASELSAN has played a crucial role in many technological advances that Turkey has recently achieved. The embargoes imposed on our country during the 1974 Cyprus Peace Operation had shown how vital it is to have independent technologies.

ASELSAN has played a big part in many technological advances that Turkey has recently achieved. The embargoes imposed on our country during the 1974 Cyprus Peace Operation had shown how vital it is to have independent technologies. When our company was first established almost 50 years ago as a reply to the embargoes, its mission was to meet the communications needs of our army nationally with radio systems being produced. With the increase of needs and the realization that much equipment priorly imported could be manufactured better with national resources, solutions in different areas were produced. Here, the inspiring motivation that ASELSAN had was being innovational by questioning the status quo of "foreign source dependency." Employees and leaders working with this motivation transformed ASELSAN into a national leader and a global player in its field. We have not stopped on the challenging path that we took, not under any circumstances. We produced the best in the world, in spite of being told "You cannot produce this." Established in 1975 to meet the communication device needs of the Turkish Armed Forces, ASELSAN continues its sustainable development with a wide spectrum of products from communication systems to radar and electronic warfare systems, from electro-optical systems and border security systems to unmanned vehicles, and from weapons systems to missile defense systems.
Undoubtedly, high-quality personnel potential is required to have an establishment like ASELSAN and ensure its sustainability. In this respect, could you explain the link between a trained labor force and technology development?

Of course... Superiority in advanced technology is only possible with strength from the sciences, and with people who have devoted themselves to education and to their jobs. All three of these crucial elements are present in ASELSAN and our national defense industry. We make ourselves responsible for minimizing our country’s dependency on foreign sources, not only in the defense industry but also in other industries, by focusing on science, education, and commitment. We contribute to reducing current deficits by producing technological products with high added value. The use of our technologies in sectors other than the defense industry is of vital importance for our country. With this consciousness, we have put advanced technology systems at the disposal of our state, our people, and friendly countries in the transportation, energy, security, and health sectors.

Could you please tell about ASELSAN’s work in this respect?

ASELSAN has undertaken a national duty as a technology company that starts with the design and manufacturing process of materials with specifications at nanometer dimensions, designing and manufacturing systems for all kinds of land, air, naval, and space vehicles and integrating these with all kinds of platforms with the technology development efforts it has pursued. With the solutions that we deliver with an innovative perspective, we also pioneer the use and popularization of new technologies in our country.

Our company, which is an essential stakeholder in the National Space Program, develops systems for the presence of our country in space. In line with the space strategies of our country, ASELSAN sped up its work on satellite technologies and has undertaken significant responsibilities with products for different components of these technologies and with the services it provides. We have made serious achievements for our country regarding space and satellite technologies as a result of the technological progress up to this day and our solution-oriented approach at ASELSAN. We continue our mission regarding payload, communication subsystems for space vehicles or satellites placed in orbit, stationary and mobile ground stations, control centers, and satellite communication terminals for all platforms for ground sites. We will carry the technological achievements that we’ve made even further into the field of space.

ASELSAN MTAL is an unmatched high school with the opportunities it presents to its students both during their training and afterwards.
Our country is experiencing a rapid nationalization process, especially in the defense industry. At what level is ASELSAN’s contribution to this process?

We are the pioneering establishment, the engine of defense technologies in Turkey. With this advantage, we also take on the mission of nationalization of foreign resource-dependent products, the supply of which could pose trouble due to possible embargoes or restrictions. Reviewing all the products that are imported and considering criteria such as the criticality of the technology, exportation limitations, the cost effect, and acquisition time, we prioritize the nationalization of certain products. We have achieved the nationalization of 400 products in three years with our partners. Placing an order for these products that costs 56 million dollars, we ensured that 145 million dollars remained in our country according to a projection concerning the forthcoming three years. We are proud to have increased the domestic purchase rate from 38% in 2008 to over 70%. We are constantly developing our ecosystem with over 4,000 suppliers. We continued to feed our supplier ecosystem with new orders in the first half of 2021, and in this context, we have placed orders of 760 million dollars. In the first half of 2021 alone, we paid over 7 billion lira to our suppliers and supported them financially.

We are designing and manufacturing, domestically and nationally, the most critical technologies that will have a place in the world of the future, working for a sustainable future. In our company, which is one of the largest R&D bases in Turkey, we place emphasis on topics such as the development of core technologies that require substantial capital, knowledge, and qualified staff, such as nanotechnology and microelectronics. We are striving to provide game-changing new methods and approaches.
Sustainability is crucial when technology is at stake. Sustainability can only be provided with a qualified workforce. What kinds of practices does ASELSAN have for assessing its present human resources?

None of our achievements are coincidence, none of our steps are unplanned. Behind all products and systems we manufacture among both defense and civilian technologies, and all corporate business processes such as human resources, training, and communication, there are high-capacity human resources, which we can call the best of Turkey, and the power we derive from science and the value and hard work that we give to our people.

At ASELSAN, we continue our investments and support to clear the way for the young, who will change the future of the country and work for the country’s technological independence. The approaches and projects we present in this context will serve as a model for the world. As part of the protocol signed between the Ministry of National Education and ASELSAN to train qualified staff for the defense industry, we established the first Vocational and Technical Anatolian High School in 2019. ASELSAN MTAL is an unmatched high school with the opportunities it presents to its students both during their training and afterwards. Our students, who receive their training in workshops established at the school, have the opportunity to advance their theoretical training with practice on site. In addition, with the ASELSAN internship programs, it is ensured that these students gain experience. After their training, we can introduce the students’ work potential to our work force without losing any time with the ASELSAN employment program. This school is backed by ASELSAN, the defense and technology giant of our country. We definitely assign a mentor to every student, technicians and engineers. We provide this mentorship support from the first minute in school until graduation for them to train in the best way. In addition to the standard courses, we make an effort to train our students in areas such as robotics, mobile coding, artificial intelligence, and big data. These young students will be the ones not only following technology but creating technology.

In this context, what kind of cooperation do you develop with universities?

Prioritizing a culture of common sense and value creation, we have a high opinion of
R&D cooperation with universities. In today’s world, universities are considered one of the most important stakeholders of the defense industry, the main capital of which is their pool of highly qualified human resources. Universities, in addition to providing a skilled work force and training opportunities, contribute to industrial technology development activities at an ever-increasing rate. We have many projects developed within university-industry cooperation for the realization of basic research at universities and then for its industrialization at ASELSAN. In addition, in events promoting open innovation, we organize thematic workshops and we undertake innovative projects with the ideas generated in these events. To benefit the best from the knowledge of academic staff and the innovative ideas of the students at these universities, we strive to undertake R&D projects within the structure of our company in collaborations, especially with universities.

Each year we allocate 7% of our revenues to R&D activities. According to the Survey on Companies with the Highest R&D Expenditures, we were the company with the highest R&D expenditure in 2020, at 3 billion, 356 million lira.

We continue to make high-quality contributions to our country’s objective of sustainable development with the achievements we make in our areas of activity. Our efforts for the sustainability of high-quality employees also continue. We are doing our duty in all cases. In 2020, in the worst period of the pandemic, we newly employed almost 1500 people.

We have adopted a vision of being a national technology company that preserves its sustainable growth with the values it has created in both the domestic and global markets, that is valued due to its competitive strength, that is trusted as a strategic partner, and that is environmentally conscious and humane. The systems produced by ASELSAN are being used by 71 countries in addition to our domestic customers. This confidence in the technology of our country always makes us proud.

ASELSAN will continue to wave the flag of our country with pride and confidence regarding technological independence and with the “Great and Powerful Turkey” vision under the leadership of the Presidency.

I would like to thank you very much for the information and assessments you’ve provided.
Prof. Dr. Mehmet Fuat Sezgin: The Thinker Who Rewrote the History of Science

Fuat Sezgin was, in the literal sense of the words, “a wise man.” He dedicated his life to resurrecting a memory that had sunk into oblivion, to transferring the accumulated civilization that had been forgotten for centuries to new generations, and to creating works that would require rewriting the world’s history of science.

Yunus Emre ACAR
Front and back faces of the commemorative coin issued in 2019 in memory of Fuat Sezgin after his death. He was granted the Republic of Turkey Presidential Culture and Arts Grand Award in 2013.
The preeminent Islamic science historian of the 21st century, Prof. Dr. Mehmet Fuat Sezgin, left us numerous books, articles, and academic and scientific works after departing this life on June 30, 2018.

Sezgin, born in Bitlis on October 24, 1924, started his career at the Istanbul University Oriental Studies Institute. His interest in the history of Islamic science increased with the effects of his professor Hellmut Ritter, and he devoted his life to this discipline. In one of his speeches, he described a dialogue with Hellmut Ritter about scholars such as al-Khwarizmi, Abu al-Wafa’ Buzjani, Ibn al-Haytham, and Al-Biruni:

“The words of my professor that ‘these and many others were great scholars, and they were at the same level as later European scholars; they are even superior to them’ had a whiplike effect on me to learn the history of Islamic sciences. I left my whole world and studied for this day and night.”

Fuat Sezgin, who received his PhD in 1950 with a dissertation entitled “Sources of al-Bukhari,” completed his work for professorship in 1956 with a thesis entitled “Research on Sources of al-Bukhari.” Sezgin, who had to leave his beloved country with the expulsion of 147 academics from universities after the military coup in 1960, continued his studies in Germany. He obtained professorship at Frankfurt University with a study on Jabir ibn Hayyan. His work entitled Arabic-Islamic Science History, the first volume of which was published in 1967, is an...
epochal work in the world of science with regard to a better understanding of Islamic science heritage. This work, which is the most comprehensive in its field, explores issues related to the Quranic sciences, hadith, history, fiqh, kalam, Islamic mysticism, po-etry, medicine, pharmacology, zoology, veterinary medicine, alchemy, chemistry, botany, agriculture, mathematics, astronomy, astro-logy, meteorology, grammar, mathematical geography, and cartography. Sezgin founded the Arabic-Islamic Sciences History Institute in 1982 to further his studies and realized his dream of establishing a museum to reflect the history of Islamic sciences as a whole with samples of all inventions. In the Islamic Science Museum that he found, he modeled over 700 devices, and he also founded the Library of Islamic Sciences History, containing a corpus of 45,000 volumes.
After political stability returned to Turkey, Sezgin decided to establish in Istanbul a copy of the Islamic Science History Museum that he had founded in Germany. He had the opportunity to realize his dream, which he had pursued ardently for years, of teaching the history and superior achievements of Turkish civilization to the Turkish people and ensuring that they more concretely saw the contributions of Muslim scholars to the history of sciences via the Museum of the History of Science and Technology in Islam established in Gülhane Park in Istanbul on May 25, 2008.

In 2010, the Prof. Dr. Fuat Sezgin Islamic Science History Research Foundation was established to support the activities of the Museum of the History of Science and Technology in Islam, and then in 2013 the Prof. Dr. Fuat Sezgin Islamic Science History Institute at the Fatih Sultan Mehmet Foundation University started its activities. With the transfer of the revenues from the sale of the books published by Sezgin to the relevant foundation and the allocation of that revenue to the students in the Scie-
A Role-Model Scholar
Believing in the Importance of Institutionalism

Prof. Dr. Fuat Sezgin, the greatest science historian, bestowed a very comprehensive body of work to the science world with his 17-volume Arabic-Islamic Science History series, the outcome of 65 years of study. Fuat Sezgin was a pioneering scholar who believed in the importance of institutionalism and who pushed himself to achieve it. Some of the institutions established with his efforts, the importance of which are indisputable regarding Islamic science history, are as follows:

Arabic-Islamic Sciences Institute: Founded in 1982 at Wolfgang Goethe University in Frankfurt.

Arabic-Islamic Sciences Museum: Over 800 objects are exhibited in the museum, which was founded in 1983.

Sciences History Library: It has an unparalleled collection of works, one of a kind in the world in science history, with 45,000 books and almost 10,000 microfilms.

İstanbul Museum of the History of Science and Technology in Islam: Opened to visitors in 2008 in İstanbul's Gülhane Park.

Prof. Dr. Fuat Sezgin Islamic Science History Research Foundation: Established in 2010 to support research on Islamic science history.

Fuat Sezgin also made attempts to ensure that universities in Turkey maintained academic interest in science history, and he founded the Science History Research Foundation Press, and he ensured that academic studies in the science history field would be more systematically published.

Kaynak: https://www.ibtav.org/sayfa/2/onculugundeki-kurullar

Sezgin was a member of various academies, both national and international. These included honorary membership in the Cairo Arabic Language Academy, Damascus Arabic Language Academy, Morocco (Rabat) Royal Academy, Baghdad Arabic Language Academy, and the Turkish Academy of Sciences. In addition, he received honorary PhD titles from Erzurum Atatürk University, Isparta Süleyman Demirel University, Kayseri Erciyes University, and İstanbul University.

Prof. Dr. Fuat Sezgin died on July 30, 2018, at the age of 93, and he was buried in a special area allocated for him in front of the Museum of the History of Science and Technology in Islam in Gülhane Park, following a well-attended funeral prayer at Fatih Mosque. Sezgin, one of the rare personalities in the 21st century for whom the saying “devoting one’s life to science” is truly applicable, has left a wonderful heritage for the next generations, and his exemplary behavior instilled an indescribable self-confidence in the young scholars of the Islamic world.

May he rest in peace.

1 https://www.ibtav.org/sayfa/3/ozgecmisi
2 http://w3.bilecik.edu.tr/fuatsezgin/fuatsezgin/ozgecmisi/
The Training Initiation Ceremony in the Ottoman Empire

Children, who received their first education from their parents, started their formal training when they were five or six years old with Âmin Alayi and Bed’i Besmele ceremonies. Âmin Alayi meant a ceremonial procession from home to school and back, while Bed’i Besmele meant the children began their education by saying “bismillah.”

Prof. Dr. Cevdet Kırpik
Erçyes University, Faculty of Education

Image 1: First Day of School by Jean Baptiste Van Mour, 18th century
(Source: Mehmet Ustünipek and Seyda Ustünipek, Âmin Alayi ve Resimde Ele Alınışı)
n the Ottoman era, the start of education would be realized with ceremonies with distinct characteristics. Since learning science was considered as a religious duty, the first step in this enterprise would be attributed a nearly sacred meaning. There were many interesting details before, during, and after the ceremony, fundamentally comprising two phases for school-aged children.

Children, who received their first education from their parents, started their formal training when they were five or six years old with Amin Alayı and Bed-i Besmele ceremonies. Amin Alayı meant a procession that went from home to school and back, with a teacher, a group of students, and other participants, while Bed-i Besmele meant the children began their education by saying “bismillah.” The Bed-i Besmele ceremony was also called “bed-i besmele-i şerife” to emphasize that it was an important and honorable deed.

The age range for the ceremonies was between 5 and 6 years. However, it was believed that it would be ideal to begin education at 4 years and 4 months old, and attention would be paid to organizing a ceremony at that time. The ceremony, which was known since the early periods of the history of the Ottoman Empire, lasting more than six centuries, had some particular phases.

The ceremony was attributed utmost importance, as much as even a wedding, by Ottoman families. Much money was spent for its organization and no sacrifice would be avoided. The preparations for the child to start his or her education would begin days and even weeks before. Since it was planned to offer meals and other gifts, sheep would be bought and sugar and sweets would be obtained. Preparing the educational materials for the candidate student and gifts for the teaching staff and other students participating the ceremony was another important consideration.

While the preparations for the day of the ceremony varied with regard to the economic level of the family, the things to be done at minimum were certain. First, a special bag (cüz kesesi) would be prepared for the children who would be starting their education. The bag would be sewn from fabric such as velvet or satin. The basic educational materials were an alphabet primer; a lectern; the Holy Quran; a crescent made of bone, silver, or gold to follow along the part of the Quran being recited; and wax to mark the end of the lesson. The clothes and shoes to be worn at the ceremony and later at school were essential.
Offering meals was one of the important principles of the ceremony. The diversity and richness of the meals varied with regard to the wealth of the family and regional traditions. The child’s family had to buy gifts and obtain coins to give to the children for the day of the ceremony. Gifts such as towels, money, handkerchiefs, or fabrics would be prepared for the teacher, and desserts would include baklava, special rolls (saray sarması), and halvah.

Before the actual day of the ceremony, the child would be sent to the shrines of saints nearby, family elders, and close and esteemed friends to kiss their hands and receive their blessings. After all these preparations, it would be time for the ceremony. Mondays or Thursdays would be selected for these ceremonies. The day would be determined jointly by the family and the teacher. On the morning of the ceremony day, the child would wear new clothes and shoes and wait with excitement. If the ceremony was for a girl, she would wear silky, ornamented clothes, with a silver-threaded pouch containing the alphabet primer across her chest. The teacher and the students who would be the classmates of the child would arrive at the house of the child in a group of boys and girls, reciting prayers, hymns, and “amen.” The child would be mounted on a peaceful horse, a pony if possible, or a coach, or would proceed on foot holding the hands of his or her parents, and depart toward the school in the company of the group that had arrived to take him or her.

At the front of the Âmin Alayı procession would be the master or teacher, who carried a cushion. After him, the district watchman would follow, carrying the lectern (or sometimes the school attendant known as the bevvab), and then the schoolmates who surrounded the child. At the back, family members of all ages followed, women and men; they would arrive at the school with prayers, hymns, and calls of “amen.” The children in front would be singing hymns, and they were called chanters, and the ones behind them were referred to as amincı since they called out “amen.” During the procession, a hymn about the silver rivers of Eden (“şol cennetin ırmakları akar Allah deyu deyu”) would generally be sung. Sometimes animals would be sacrificed at the entrance of the school.

After the prayers were recited, the father of the child would offer the gifts, which had been prepared in advance. After the gifts were given, the father would say to the teacher: “From now on, my child is entrusted first to Allah and then to you. His flesh is yours, his bones are mine.” When it was time to leave the classroom, the students would take sides along the left and right of the classroom, and the joyful and proud father of the child would give small amounts of money to their open hands and make them happy. At this point, the children would also be offered candies and sweets in cones. School personnel who made contributions to the ceremony, such as the assistant to the teacher and the school attendant, were not left out of the distribution of money. If the procession that had gone to the house to take the child was not offered a meal at the house, then the feast would start at school.

The return to the house would be done silently without the Âmin Alayı.

However, the child, who continued the joy and celebration at home, would be welcomed by family members and relatives as if in ecstasy and with prayers, virtually drowning in a flood of emotions. Thus, the happiest day of
ing, and performing prayers would be taught. Toward the final years of the Empire, the variety of courses was increased and history, geography, arithmetic, calligraphy, Turkish, and some foreign language courses were added, and graduates of teacher schools were assigned to the teaching staff.

After the establishment of primary schools affiliated with the Ministry of National Education (Maarif Nezareti at that time) started in the last quarter of the 19th century, building costs and all expenses, mainly staff salaries and cleaning, were undertaken by foundations that had regular revenues. If there was no such foundation undertaking the mission, the local people would build the school together and the expenses were covered by wealthy families. In these schools, the education could be provided as mixed-sex education or it could be segregated. The teachers of the schools were selected from among men mostly, but some of the teachers of the girls’ schools could be women.

Families of higher economic status who did not send their daughters to school and had them trained by private tutors at home would not neglect the ceremony for starting education. For these children, too, preparations would be made, as for other children; however, the Âmin Alayı part would be missing, and the Bed‘i Besmele would be held at home in an almost sublime ceremony.

It was natural that the details of this ceremony, understood to be mostly performed for the children of well-situated families, would vary considering the breadth of the country’s frontiers, ethnic diversity, and differences in economic levels. Despite this, the main elements of the ceremony, such as
the Âmin Alayı and Bed'i Besmele, did not change. For instance, it is known that this ceremony was performed, with the main elements being the same, among the Ottoman dynasty, which was at the top of the hierarchical system in Ottoman society. The Âmin Alayı and Bed'i Besmele ceremonies organized for the children of the Sultans, the princes (şehzade), were naturally more flamboyant and had different details compared to ceremonies for the children of other families. We can look at a few ceremonies for princes to see the performance of this tradition in the palace and to make comparisons.

CEREMONIES FOR THE PRINCES

Dramatically embellished ceremonies were held for the beginning of the education of the princes, who had been raised with special interest and diligence from other palace servants in addition to their mothers from birth onwards. The preparations before the ceremony, the number of participants, the meals given, the gifts offered, and other details had some special characteristics pertaining to the dynasty.

First, the time of the ceremony would be confirmed, and later the invitees would be determined and their names would be recorded in a notebook. If there were names forgotten, they would be added later. In the 19th century, the ceremony could be held at the Beşiktaş Sahilsarayı and Çırağan Palaces or the Osman Pasha Mansion, belonging to the dynasty. An elite community comprising the leading statesmen and scholars would be invited to the ceremony, and a sumptuous feast would be offered to them. The age for education among the princes varied between five and seven.

Abdulaziz II, the son of Sultan Mahmud II, was five years old. The preparations started with an announcement that the ceremony for the beginning of his education would be held in the spring of 1835, namely on May 7th. For this, first the senior administrators, palace employees, and religious scholars were invited. All students and teachers of all schools in Istanbul were required to participate in the ceremony by the order of the Grand Vizier. The administrators would participate in the ceremony with their official vestments.

For the ceremony, large tents were set up near the mansion around Mir-i Ahir Fountain in Kağıthane. The ceremony would be held there. On the day of the ceremony, school children and some other participants arrived at these tents chanting “amen.” They had meals there. A state tent was pitched at the entrance of the aforementioned mansion and imams and preachers were placed there. The First and Second Imams of the Sultan each recited one part of the Quran (asr-i şer-if). As the arrival of the Sultan drew near, the guests lined up to the left and right of the state tent. After a while, the Sultan left the palace with attendants. The Sultan was met by the Grand Vizier and the Seraskier. Other guests, lined up to the sides of the state tent, saluted the Sultan with “salaam.” When the Sultan arrived, the First and Second Imams of the Sultan again each recited one part of the Quran. At that moment, Abdülmecit, the elder son of the Sultan, and Prince Abdulaziz appeared. The princes wore jackets with epaulettes and had ornamented swords. They were accompanied by their tutors and other statesmen. When the determined hour came, the prince sat on the cushion prepared for him, a religious leader had him recite “bismillah,” and he was also made to read the letters of the alphabet. After this, the princes

Dramatically embellished ceremonies were held for the beginning of the education of the princes, who had been raised with special interest and diligence from other palace servants in addition to their mothers from birth onwards.
and guests left the ceremony grounds, paying their respect to the Sultan. The sheiks, professors, preachers, and imams were given presents. The following day, the officials at the imperial college (Enderun), its teachers, its students, and some other participants were also given presents.

In the summer of 1847, a sweet commotion began in the Ottoman palace. Murat V, one of the children of Sultan Abdülmecit, was 7 years old, while Abdülhamit II was 5 years old. It was announced that the children would start their education and a ceremony would be held. The ceremony was announced via the official newspaper of the state, the Takvim-i Vekayi, and the preparations commenced. Later, the details of the ceremony were elaborated with an imperial order issued by the Sultan. The Bed-i Besmele would be organized on September 20, 1947, and the Sultan would go to his mansion at Haydarpaşa a day before.

When the day came, the guests arrived at the ceremony area in the meadow of Haydarpaşa. A tent was set up for the Sultan. While the princes were advancing toward the Sultan’s tent with a group of children attending other schools in Istanbul, prayers and hymns were sung and chants of “amen” reached the heavens. The Sultan was accompanied by ministers and other senior statesmen and guests. The children were welcomed by the committee. When the princes arrived in front of the Sultan, an ornamental lectern and a cushion were placed before a religious leader (shayk al-islam). First Murat recited “bismillah,” following the sheik, and then he read the letters of the alphabet and completed the process. Later, the same process was followed for Abdülhamit. Then the shayk al-islam and the sheikh of the Murat Molla Dervish Lodge prayed. The school children who had arrived with the princes joined the prayers, saying “amen, amen.” After the prayers, cannons were fired from the entrance of the Selimiye Barracks and the ceremony ended.

The princes would continue their education after this grandiose and splendid ceremony at the Şehzadegân Mektebi or Princes’ School in the palace. The most important scholars of the era would be assigned as teachers to the princes. The princes would receive courses such as fundamental religion education and reading, writing, and arithmetic. Additionally, they would attend other courses related to administration. Regarding the diversity of the course content, the number of the professors would increase.

Be it for a future Sultan or a simple member of society, these ceremonies held at the beginning of one’s education had many objectives and benefits. The application was oriented toward humane and pedagogical objectives. With this ceremony, the child would be aware that he or she was commencing important work and would feel that he or she was deemed important. While entering an unknown place or environment is a source of anxiety, concern, and excitement for everyone, the anxiety of the child would be minimized with this ceremony and it was ensured that the child became acquainted with the educational environment and that his or her first impressions and memories of schooling would be unforgettable. This process, which gave the impression that the child was starting a serious undertaking, was a powerful source of motivation from the beginning to the end for the child. The ceremony had characteristics encouraging education, not only for the princes or students but also for the other children and their parents.

The ceremony, in fact, gave hints about what kind of education the child to be trained would experience. The commencement and ending of the ceremony with hymns, bismillah, and prayers were signs that they were starting spiritually important work. This was a mark of the importance given to education in the Ottoman Empire. The school provided religious training first. With that training, the aim was that people would be happy both in this world and in the afterworld. Whatever the limits of the education to be received might have been, it was aimed to train people who could recite the Quran and understand the fundamental principles of the religion. These people represented good citizens and the ideal of raising good citizens, since the administrative and legal system in the country was a religious one. The ceremony for beginning education, which would become history together with the old-fashioned elementary schools (sibyan mektebi) during the transition from the Ottoman Empire to the Republic, was a nice tradition, not well known by today’s people and only encountered in history books.

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Pedagogue

The etymology of this word, which we often use in education and encounter in debates asserting that “this is not an appropriate situation pedagogically” or in phrases such as “pedagogical approach” or child pedagogy, has reached the present day with an intriguing change of meaning. It once referred to a slave who could not be employed in other work due to young age or physical weakness and who thus ferried Athenian children to school and back, and who generally knew how to read and write. Today, it appears as a good example of the fact that language is a living thing that develops and changes constantly. The word is now used in education for teachers and trainers. It is formed by compounding the words 

"paîs, paíd, i.e. “child,” and agōsós, i.e. “govern” or “guide,” in ancient Greek. “Paú,” the oldest root of the word, which is borrowed from French, means “little slave.”

Creche

The meaning and usage of this word, which corresponds to “nursery” today, coming to the rescue of parents, has changed fundamentally throughout history. In French, creche means “cradle,” “crib,” or “hayloft.” The word has evolved from the Germanic word kribjan, or "cradle." The phonetic similarity to the word kirche, or “church,” is due to the fact that there were nurseries in churches. In the Christian tradition, children who were not of school age were cared for by priests and nuns in the churches. In this respect, the creche was a part of the church. If we are to elaborate on the meaning of the word, it is accidental that it is also used to denote “hay” or “hayloft.” In Christianity, Jesus Christ is believed to have been born in a hayloft. The construction for Christmas also known as the Christmas cradle or Christmas crib in Bethlehem was the embodiment of this belief. Christians continue that tradition with the words kinderkränpe or creche for their children.
ISBN

An area comprising black and white stripes and numbers at the lower left corner should attract your attention when you turn to the back of a book. Let us explain what this area means and why it is placed there.

ISBN is an acronym of the phrase “International Standard Book Number.” Intriguing, isn’t it? As printing developed and the printing of books increased, humans created a system to facilitate this situation. Making the most of technological benefits, a way to identify books with a standard number was sought. In this system, prepared by the International Organization for Standardization (ISO), books are given a number comprising 5 groups and 13 digits. The first group is the ISBN prefix. The second group shows the country in which the publication was done; the third group indicates the publisher and the fourth corresponds to the serial number of the material. The fifth group consists of a single digit that enables the validity check of the ISBN.

This numbering system is not used only for books. In addition, it is used for publications such as catalogues, microfilms, video films and cassettes, computer software, atlases, works printed in Braille, and electronic publications. With this system, one can easily order a book or a CD, and one can easily find the missing issues of periodicals and books in a library and complete the series. A quick tip: The ISBN numbers of the books printed in Turkey - supposing that you are looking at the back of the books - start with 978.

Abacus (Çörkü)

When we ask what the subject is that improves the minds of people and allows them to perform analysis, one would always answer “mathematics.” For some reason, though, we are afraid of this subject. There are many reasons for that; however, there is a tool that endears mathematics to us all. We have even improved our sense of aesthetics by making patterns and shapes using this tool, in addition to performing mathematical operations. We are talking about a simple tool, in which colored beads are drilled into the center like rosary beads, strung on several metallic wires mounted on a frame, and moved here and there: the abacus. The “tool used for calculation,” or mihsap, derived from the Ottoman root حساب, with the instrumental form, is called abacus in French. The origin of the word is borrowed from ἀβαξ, ἀβακος or “table” in Greek. It is known that this word was used to denote calculation or estimation in Latin. This tool, the use of which dates back to 2400 BC, was also used by Turks in the ancient era. Our ancestors built a simple calculator to use in mathematical operations by scraping the earth. With the phonetic change of çukur, or “hole” in old Turkic, and inspiration from the sounds of the beads and stones, the onomatopoetic word çörkü was obtained. Another etymological explanation is that the word was created using a degenerated form of the Persian چرخ/چرک (“wheel,” “treadmill”) or the Sanskrit word chakra. Such usage is possible with a phonetic change with regard to the rolling of the beads and stones.

“Disordered Children”

As we all know, people with congenital physical or mental ailments are called “disabled.” The education provided to them is called “special education.” The term corresponding to special education in the Ottoman period was “disordered” [gayrı muntazam] children. In the Ottoman era, these children were shown special diligence and different teaching techniques were used for them. In the period of Sultan Abdülhamit II, in which great developments were made and many European-style schools were opened, one of the major steps taken in education was the establishment of the Deaf Mute School, opened on September 30, 1889, to enable such children to integrate in society. A class for the blind was added to the school in 1891. The uniforms, alphabet, and curriculum of this school and the opportunities it provided to its students were considerable steps in special education. The Ottoman Deaf, Mute, and Blind School was a pioneer in the education of the disabled. Today, the Directorate General for Special Education and Guidance Services conducts significant and remarkable work in this field.
Pixels Versus Content

Preferring quantity over quality, objectivity replaces subjectivity. The sharp quality of an image gradually clouds the content, sometimes destroying it. Sharpness sometimes even masks a lack of context. Thus, while the image is aimlessly and uselessly glorified, the essence is evaded.

The relation of photography and art has been continuing in a torrimonous way from 1827, when the first photograph was taken, until today. While photography has deeply influenced first painting and then cinema, its artistic status continues to be controversial. When compared with the long history of ancient branches of art such as painting, sculpture, and architecture, it is logical that photography is considered to be in its infancy.

On the other hand, photography has become one of the big essentials of our daily lives. Photography, which is integrated with computers and mobile phones, especially since the digital transformation, has become the most influential area of the sharing of our social lives with the global popularization of tourism movements.

The relatively easy accessibility of cameras with changeable lenses, called SLR and later DSLR (digital single-lens reflex), due to the decrease in their prices, the foundation of new departments of photography at universities, and the direct relations of design, cinema, and communications education with photography have provided photography with new opportunities as a means of expression. Photography exhibitions and information on the subject in books, journals, and websites have made crucial contributions to the artistic development of photography.

In addition, many successful artists have appeared, adding artistic value to photography both in our country and in the world. Apparently, photography will undertake a more active role as a means of expression in the future.

Today we have difficulty finding this wholeness in some works that are produced in the name of art. However, the act that we call art is an intrinsic essence or content that forces the artist to manifest it. Every artist has to create an appropriate form to manifest these inner reactions.
INTEGRITY OF CONTENT AND FORM

Whether it is photography or another work of aesthetics, every work of art comprises content and a form that carries the content. Content and form, the enclosure and the enclosed, should embrace each other tightly. The essence and the form expressing that essence create an inseparable whole. In fact, they should, because today we have difficulty finding this wholeness in some works that are produced in the name of art. However, the act that we call art is an intrinsic essence or content that forces the artist to manifest it. Every artist has to create an appropriate form to manifest these inner reactions. This balance of essence and form is an indirect means that brings together the work of art and the receiver; in other words, it carries the artist’s message to the audience. Picasso’s Guernica or Tolstoy’s War and Peace are the most obvious examples of this balance.

Everyone encountering a work of art could also communicate with the work and artist when they have clear answers to the questions of “What does this work of art tell?” and “How does it do so?” The harmony and balance between the content and form is the assurance of this communication. This connection is so strong that even if the artist has left the world, receivers continue to interact with the artist through the work of art. Artists such as Yunus Emre and the miniature artist Levni, who passed away centuries ago, continue to convey their messages to us when we succeed in communicating with their works.

For a photograph to have an artistic power of expression is only possible with harmony and balance between its content and form. It should provide answers by itself to the questions of “What does this photograph tell, and how does it do so?” From this perspective, it is easily understood that photography is at the beginning of its journey on the path of art. Under the aforementioned circumstances, despite numerous schools, courses, global sharing popularity, and ease in accessibility, very few photographs are truly artistic. Unless the eye looking through the viewfinder and the finger pressing the shutter button have an artistic sentiment, it is not possible for the camera, no matter how developed it is, to produce a work of art.
WILL ADVANCED CAMERAS MAKE YOU AN ARTIST?
Cameras with artificial intelligence that can make decisions on behalf of the photographer; production and consumption for sharing sites that do not allow for thinking, analysis, or assessment; media controlling societies and mass culture; and photography enthusiasts who think that they create art by taking alluring pictures all pose serious obstacles to the artistic voyage of photography.

On the other hand, image capturing devices with ultra-high pixel levels also pose a dangerous trap for photography. Pixels, prioritizing quantity over quality, have been transformed into a commercial instrument of war. The commercial competitions between video cameras and cameras, and even mobile phones, are being carried out mostly over pixels.

It would not be appropriate to go into technical details here, such as “What is the real effect of pixels on photography?” or “How is the pixel rate calculated?” However, in brief, a pixel can be defined as the smallest unit that allows the capturing of an image in digital panels. The film in analogue cameras was replaced by a light-sensitive sensor comprising millions of tiny electronic windows, called pixels.

Camera or monitor manufacturers sometimes make misstatements. The statements by some smartphone manufacturers that their products are superior in pixels compared to DSLR cameras, although discursively correct, is a deception in real life. In a digital system, the factor determining the quality of an image is not the number of pixels, but the size of the sensor. Lenses are also just as effective as the sensor. If we are to compare an image of 15 pixels produced by a flagship model smartphone, it will be at lower resolution, incomparable to the image quality of a 15-pixel image produced by an old DSLR camera. Although it does not pose a problem when these two images are viewed on a small screen, it will be seen that there are serious losses in the details of the image taken by the mobile phone when one views it on a larger screen or tries to print it out.

What kind of a threat does pixel resolution pose to photography when the image quality increases each passing day and it is obvious that it will continue to increase further in the future?

UNQUALIFIED QUANTITY
Preferring quantity over quality, objectivity replaces subjectivity. The sharp quality of an image gradually clouds the content, sometimes destroying it. Sharpness some-
times even masks a lack of context. Thus, while the image is aimlessly and uselessly glorified, the essence is evaded. The balance between content and form is disrupted at a non-proportional speed, and what the photograph tells or what it should tell escapes attention, and sometimes it is allowed to slip on purpose. All fields of interest are gradually becoming the form, and only the sharpness factor of the form.

The super-realistic paintings that imitate photographs, which emerged in post-1960 America, and the many contextless photographs that imitate them serve objectivity. Again, the hyper-realistic sculptures that we often see, which imitate the hair and even the scars of people, developed from the masks used in the Hollywood cinema industry, serve the same objectivity. I would like to state that it is important to separate the sculptures by Ron Mueck, who produced by starting from content that would bring the audience up against the realities of life such as birth and death, and who established balance between form and essence well. In music, too, we see that the production of lasting works of art developed inversely proportional to the rapid developments in sound recording and listening devices.

The end of this side road, which is seen as a small deviation, opens upon a dangerous, modern valley, where objecthood threatens and even abuses subjectivity. The precedence of objecthood over subjecthood would create interconnected results such as the precedence of quantity over quality, good over beautiful, and crooked over straight. The disruption of the balance between content and form, as a basic concept of art, seems that it will cause serious results that are both perplexing the perspective of the individual and steering the perception skills of society.

It is true that the equipment we hold in our hands is superior to the equipment used by Sabit Kalfagil and Ara Güler; however, this does not mean one would take photographs artistically better than theirs.
CULTURE AND ART

Ahî Evran and the Ahî Community

The Ahî community, which expected the earthly and heavenly happiness of its members, attached utmost importance to education and considered education as a lifelong activity. Education is addressed with a professional, social, cultural, religious, and ethical unity in the educational model used by Ahî unions.

The books of history write that “the gates of Anatolia opened to the Turks with the victory of Manzikert.” But what about later? Every military and political victory should be crowned with the construction of culture and civilization in those lands. Turks had started to migrate to Anatolia intensively after the victory of Manzikert (August 26, 1071), and they spread Turkish civilization and struggled to make these lands their eternal homeland. The success of this struggle was possible with the Ahî community. The Ahî community had a great influence in transforming Anatolia into a Turkish homeland and in the development of Anatolia economically and educationally, transforming Anatolian people to job-holders who obtained professions as productive and educated people. However, in order to understand the Ahî community, we should first know about the founder and legendary leader of the community, Ahî Evran.

WHO WAS AHÎ EVRAN?

2021 was declared the Year of Ahî Evran by UNESCO and the Presidential Circular, since it is the 850th anniversary of the birth of Ahî Evran. But who was Ahî Evran?

Ahî Evran was the founder of the Ahî community in Anatolia. He played an important role in the Turkification of Anatolia economically and educationally, transforming Anatolian people to job-holders who obtained professions as productive and educated people. However, in order to understand the Ahî community, we should first know about the founder and legendary leader of the community, Ahî Evran.

Ahî Evran was seen in Anatolia as a legendary personality with the name “Evran” meaning “snake,” “dragon,” “universe,” and “sky.”

Ahî Evran, whose real name was Pir Mahmud bin Ahmed Nasirüddin Ahî Evran bin Abbas, was born in 1171 in Hoy, today within the boundaries of Azerbaijan. Hoy is a region close to the Turkish border and a place where Turks still live. Ahî Evran, before coming to Anatolia and settling here, had passed through many important processes in different cities. He completed his first period of education in Azerbaijan, his homeland, where he had spent his childhood. In his youth, he passed through Khorasan and Transoxiana, continued his education, and received mysticism courses from the students of Ahmed Yasawi. Later, in Herat, he learned both rational (scientific) and revelational (religious) teachings from Fakhr al-Din al-Razi, a famous scholar of that period.

The turning point of Ahî Evran’s life was his encounter with the famous mystic Sheik Evhadüddîn Kirmânî, during the hajj voyage. Evran took lessons of interpretation, hadith, fiqh, kalam, and medicine from Kirmânî, his master and later his father-in-law, and with Kirmânî’s help he entered the Fütüvvet Guild, meeting the notables of the community in Baghdad. Ahî Evran, who had made the best of Baghdad as the science and art center of that era, produced his works after reaching scholarly maturity in religious sciences such as interpretation, hadith, kalam, fiqh, and mysticism, as well as philosophy and medicine.

During the reign of Sultan Gıyasettin Keyhüsrev I in the Seljuk Empire, Ahî Evran came to Anatolia in 1206 with Ibn Arabi and Kirmânî and married Fatma Baci, the daughter of his master Evhadiüddin Kirmânî. Ahî Evran, who lived in Konya, Denizli, and Kayseri for some time, eventually moved to Kırşehir, started a leather shop, and worked as a tanner, known as “the Master of Tanners.”

Ahî Evran visited many cities and towns and played an important role in the establishment and spread of the Ahî community. He explained Islam to the artisans in Anatolia and counseled them to put their earthly
Ahî Evran’s success as a tanner caused him to be praised as the grandmaster of tanners, in addition to being remembered as a saint. In this respect, the lineage of Turkish tanners is attributed to Ahî Evran. In the Ottoman era, the reputation that Ahî Evran obtained as the grandmaster among artisans spread through all of Anatolia, the Balkans, and even Crimea.
and heavenly practices in order. He warned people about the forthcoming Mongol threat. After the death of his Master, he became his Master’s representative. This virtuous scholar and mystic, the founder of the Ahî community, in which fraternity, generosity, valor, sacrifice, righteousness, quality, production, ethics, art, mind, and science were considered fundamental, died in 1261, at 93 years of age. His tomb is adjacent to the mosque named after him in Kirşehir.

WHAT IS THE AHÎ COMMUNITY?
Explorer Ibn Battuta (1304-1369) mentions the Ahîs in his Seyahatname under the title “Ahîs and Young Brethren” with the word being formed by the first-person singular inflection of the word “ah,” or “brother.” They were found in all settlements, cities, and towns in Anatolia where Turkic peoples had settled. He describes the Ahîs as follows: “It is not possible to find their match and example around the world in issues such as welcoming the strangers coming to their homeland; attending to their needs; providing food, beverages, and accommodation; rescuing them from the hands of rouges and cheaters; and cleansing the world of those who joined with those rascals.”

The Ahî community organized all of the artisans and craftsmen in Anatolia and played an important role in the Turkification and development of Anatolia by actualizing the Ahî way of thinking socially, culturally, economically, and politically. This community was at the center of the economic and commercial activities of the society and pursued social equality and consensus, aiming to have all its members have a job, profession, or craft. It was the main purpose of the Ahî to reconcile all parts of society by establishing good relations between rich and poor, manufacturer and consumer, labor and capital, nation and state.

The iron discipline and the moral structure of the community brought them into the forefront in terms of craft and product quality. The socioeconomic life in the society was organized with the obligation that everyone in the country get a certificate of authority from the Ahî fathers to become an artisan.

AHÎ COMMUNITY AND EDUCATION
The Ahî community, which expected the earthly and heavenly happiness of its members, attached utmost importance to education and considered education as a lifelong activity. Education is addressed with a professional, social, cultural, religious, and ethical unity in the educational model used by Ahî unions. In the Ahî organization, education has several objectives: first, teaching the individual to know himself, and then raising individuals with morals, ensuring the preservation of human nature, teaching that every person is good by definition, and revealing the hidden skills of individuals and guiding those skills.

Education was provided free of charge to everyone accepting the principles of the Ahî path, and it was brought to the farthest settlements where Ahî units existed. Education was given in hermitages with a curriculum that combined theory and practice. Since the relations among masters, apprentices, and senior apprentices were basic in this education, the entry of an apprentice to the hermitage was only possible with a master being a guarantor for him. In the hermitages, importance was given not only to vocational, religious, and moral education, but also to Turkish, Arabic, Persian, literature, and music. In practical courses, on the other hand, vocational qualifications and technical knowledge were taught with exercises. In addition, the students were taught virtues such as opening and closing their shops on time, being honest, and looking after one’s rights. The candidates who had chosen the Ahî path were required to close or tie up seven bad deeds and open or put into motion seven good deeds.

WHAT IS THE PHILOSOPHY OF THE AHÎS?
The Ahî community formed a new organization peculiar to Anatolia with the Fütüvvet movement, from which it took its roots, and it did important deeds. But what was the philosophy of the Ahîs?

The Ahî movement is a system of thought guiding humanity to a common objective with
the values it contains. The source of the Ahî movement comprises both Turkish customs and traditions and the Islamic religion. Since Islam is a religion that tries to establish balance between this world and the afterworld, it requires the Muslim to look toward the afterworld but not abandon this world at the same time. A Muslim should adopt the principle of working for this world as if he would never die and working for the afterworld as if he would die tomorrow. The aim of members of the Ahî community, which took its source from Islam, was to work for happiness in this world and in the afterworld. In the Ahî way of thinking and Ahî philosophy, the human is at the very center of the system. The Ahî movement, which considers human beings equal, did not tolerate competition or social struggles. According to Ahî philosophy, individuals should work in professions suitable for themselves, and they should continue their service in a human-oriented manner making the most scholarly appropriate decisions. In this respect, the Ahî philosophy corresponds to the modern concepts of professions and professional guidance.

But who is Ahî? Ahî is the one who controls his hands, his waist, and his tongue. He is the generous one, keeping an open house and table. He is the one totally unbauched, taking good and right as principles for himself. He is the one wishing to reach perfection and living for that goal. He is the one who loves and works for his country. In short, Ahî is the one with high morals. Controlling one’s hands, waist, and tongue constitutes the essence of the Ahî philosophy. We close with the wish to be an Ahî, who controls his hands, waist, and tongue and who cares for his work, friends, and spouse...

REFERENCES

THE AHÎ PRINCIPLES
• Be good-natured and virtuous
• Abstain from grudges, envy, and gossip in professional and personal life
  • Be faithful to vows, promises, and love
  • Be content with the eyes and at heart and soul
  • Be compassionate, merciful, fair, virtuous, chaste, and honest
  • Be generous and graceful
  • Welcome the young with love and elders with decency and respect
  • Be modest, abstaining from self-importance and pride
  • Cover up, hide, and forgive faults and flaws
  • Abstain from reproaches
  • Be sweet-spoken, frank, gracious, and reliable for friends
• Go to the one who does not come, visit friends and relatives
  • Do good to everyone and ask them to do the same
• Abstain from bragging about kindness and assistance
  • Be on the straight and narrow, abide by the right
• Do other’s jobs sincerely, readily, and good-humoredly
  • Always be a good neighbor
  • Tolerate creatures for the creator’s sake
  • Always seek faults and flaws in one’s own soul
• Be friends with the good, staying away from the bad
  • Be honored to be friends with the poor
• Abstain from respecting the rich because of their wealth
• Say the right things for the creator’s sake, not being afraid of saying what’s right
• Protect and look after subordinates and servants
  • Obey the rules and restrictions of Allah explicitly and overtly
  • Abstain from bad words and actions
    • Be an open book, be straightforward
    • Protect rights, prevent injustice
    • Respond to misdoings and impertinency with kindness
  • Be patient and tolerant of troubles and misdoings
    • Be kind and pleasant to Muslims
    • Be frank in belief and prayers
• Abstain from bragging and boasting about things belonging to the mortal world
• Don’t pay regard to anything other than the contentment of the creator in favors and charity
  • Be friends with the wise and take their advice
  • Always trust in Allah, always and everywhere
  • Obey customs and traditions
  • Keep secrets, don’t reveal them
  • Content oneself with less, being grateful for abundance and sharing it.
DIE WELLE:
On the Power and Limits of Teaching

Being adapted from a real-life story renders the movie more interesting and valuable for educators. There are few movies that tell about the vital role of a teacher in the formation of the student’s sense of identity in such a striking way as Die Welle, translated into Turkish as “Tehlikeli Oyun” (Dangerous Game) and English as “The Wave.”
Being on stage and being the focus of interest, of all stares, must be exciting for a performance artist. The artist, who aims at emotionally and cognitively changing the audience in front of him, makes them have an emotional experience while having a significant experience himself. Teachers have the power of influence over their students, just like the dominance of a performance artist over his audience.

The teacher, who is a vital stakeholder of education, causes changes in the knowledge and perspectives of students with both the things he explains and his behaviors. With his presence in the classroom, the teacher creates a sphere of influence and pulls all the students into that sphere because the teacher is the center of focus himself when giving lectures at the blackboard or “on stage.” This focus brings about a responsibility, in which the teacher becomes a role model for the students, in addition to administering and guiding the classroom, differently from a performance artist. After closing the classroom door, he is in front of his students, as the conductor of his own orchestra. The teacher, aware of this power at hand, makes all available instruments a part of his performance to attain both near and distant objectives of education. Teachers who are unaware of this power spend the day mindlessly explaining their lessons, ignoring the change in students, and thinking about bringing students “into line” like photocopy papers coming out of a machine. However, every individual has different and unique characteristics, like fingerprints.

In addition to the influence in the classroom, the teacher, in fact, is a representation. Many examples of teachers can be seen on movie screens, sometimes acting as a bridge between school authorities and students, sometimes prioritizing the importance of the school authorities, and sometimes devoting themselves to the freedom of the students.

The teacher is the living and the most real source of knowledge with which students have direct contact. In this respect, the teacher has power, the limits of which cannot be estimated, to orient students toward certain objectives using their intimacy. More clearly, the teacher has the power to capture and manipulate their emotions and consciousness. Manipulation means changing and shaping information by selecting, adding, and subtracting. There are very few movies that show us the change in a situation due to manipulation like Die Welle does, translated into Turkish as “Tehlikeli Oyun” (“Dangerous Game”) and English as “The Wave.”

A teacher bringing students into a network of manipulation in a lesson, to which he has come unprepared to teach about autocracy, and the unfortunate results of this process constitute the main theme of the movie. The objective of the lesson is to teach what kind of a government autocracy is; however, the teacher finds himself at a dead-end, since he is not aware of the changes the learning process causes in his students. The teacher’s audience comprises adolescents, and this stage of human development cor-
Mr. Wagner, who approaches his students with propaganda techniques in Die Welle, surrounds the perceptions of the students with the wave he has created and gives them the perception that they cannot exist in other identities.

responds to a critical time frame. Teachers giving education to this age group should be aware of the development processes of the adolescent. Adolescence is one of the most complex stages of an individual, both cognitively and emotionally. This stage is a period in which the search for identity is at its peak, children are affected by their friends more than their families, and egocentrism is at its highest level. The individual, striving to build an identity for himself, can easily fall under the influence of the things he sees and hears around him and the people and organizations that he takes as role models. Mostly, he adopts the ideology of an environment where he can “bring himself to existence” or “his existence is accepted” as his own identity.

In the movie, Mr. Wagner, the teacher, who does not properly anticipate the behavioral patterns of adolescents, presents a new identity that the students could bring into existence in a democratic way. The students, who think that their existence has found meaning with this new idea, create their own representations in this organization; they create a new identity with their own greetings, clothes, logos, and so on and thus they create a safe environment that satisfies their sense of belonging in terms of mass psychology. The plot of the movie enables an understanding of how an identity crisis could be shaped with a friendly environment and ideologies, and thus an understanding of adolescent psychology. However, the teacher’s failure to predict what effects this game, which he both directs and plays himself, will have on his adolescent students, at a transition point of development, makes the process end in unfortunate events.

In the film, Mr. Wagner draws a profile of a teacher who lacks the foresight to calculate the possible consequences of manipulation for both his students and himself. The results of this shortsightedness could be devastating among children at the stage of adolescence. Mr. Wagner deviates from the objectives of education in the fiction that he himself has fallen into and suddenly loses control.

Regardless of the content, lesson, or topic, a teacher should know that there is feedback for the performance he displays on stage. In the film, Mr. Wagner draws a profile of a teacher who lacks the foresight to calculate the possible consequences of manipulation for both his students and himself. The results of this shortsightedness could be devastating among children at the stage of adolescence. Mr. Wagner deviates from the objectives of education in the fiction that he himself has fallen into and suddenly loses control.

It should not be forgotten that human psychology is considerably affected by propaganda. Mr. Wagner, who approaches his students with propaganda techniques in Die Welle, surrounds the perceptions of the students with the wave he has created and gives them the perception that they cannot exist in other identities. The students, with the excitement of discovering a new identity for themselves, embrace the new identity, which was formed in the classroom environment, and their group belonging nurtures an autocratic orientation toward the “other” and those outside the group.

Being adapted from a real-life story renders the movie more interesting and valuable for educators. As teachers we use and implement various methods and techniques to make students’ learning permanent. We may see the outcomes in either the near future or the distant future. Our obligation of being aware that we cause events of learning but we don’t know when they will appear is elaborated in Bandura’s socio-cognitive learning model. Mr. Wagner, who achieves learning by manipulating the emotional development of the students, sees the learning outcomes in one week. Although he resorts to a new emotional manipulation, trying to correct the negative outcome he has encountered, the damage is done.

The power of the teacher’s profile displayed in this movie over perception management is a method teachers often use in their lessons to direct students; however, no teacher would want to meet the unfortunate results that Mr. Wagner encounters. At this exact point, we should not forget that we are at the center of the stage when determining the objectives in education and trying to attain those objectives.
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