STEAM PLUS MULTIPLIER EVENT AND INTERGENERATIONAL EDUCATION WORKSHOP REPORT

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INTERGENERATIONAL EDUCATION WORKSHOP REPORT

Erzurum, 2023

Workshop Organizing Committee Chairman and Project Coordinator:

Prof. Dr. Hüseyin DAŞTAN

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STEAM PLUS MULTIPLIER EVENT AND INTERGENERATIONAL EDUCATIO

WORKSHOP REPORT

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Erzurum

PURPOSE, SCOPE, AND METHOD OF THE WORKSHOP

The Intergenerational Education Workshop aims to develop a solution-oriented approach to the issue of youth education and adult education, which are one of the important agenda items of many countries in the world and especially Turkey. For this purpose, one of the main goals of this workshop, which was also designed as the closing event of the Steam Plus Project, which has been carried out since 2021, is to identify the problems of intergenerational education in the countries where the project is carried out and in Turkey and to present solutions to eliminate those problems.

With the awareness of the contribution of governance style to the solution of social problems, representatives of public institutions, academics and non-governmental organisations from Erzurum were brought together around round tables. The common point of these public institutions and non-governmental organisations is their direct or indirect relations with child/youth education and adult education. Some of these institutions and organisations work in the field of education as executive authorities, while others make solution-oriented practical or intellectual contributions to educational processes.

The Intergenerational Education Workshop was organised through round table meetings with 6 different groups using 'focus group interviews', a qualitative data collection method. Focus group discussions are a form of unstructured interview and discussion between a moderator and a small group(s) in order to utilise group dynamics, gather in-depth information and generate ideas. In focus group meetings, it is aimed to understand the feelings, thoughts and suggestions of each member of the group/groups on a topic of interest.

WORKSHOP ORGANIZING COMMITTEE AND WORKSHOP PARTICIPANTS

Workshop Organizing Committee

Erzurum Technical University- Assoc. Prof. Dr. Hüseyin DAŞTAN (Workshop Chairman and Project Coordinator)

Erzurum Technical University- Assoc. Professor Mehmet Emirhan KULA (Member)

Erzurum Technical University- Assoc. Professor Burak BAŞKAN (Member)

Erzurum Technical University- Assoc. Prof. Dr. İkram Yusuf YARBAŞI

Erzurum Maturation Institute - Murat YAKUT (Member)

People who took part in the workshop

Erzurum Technical University- Assist. Prof. Dr. Meryem EMRE AYSİN

Erzurum Technical University- Assist. Prof. Dr. Sefa ÖZDEMİR

Erzurum Technical University- Research Assistant Muhammet MUTLU

Erzurum Technical University- Research Assistant Rıdvan AKIN

Erzurum Technical University- Postgraduate Osman KIZILER

Workshop Participants

Abdulhamit KOÇ – Erzurum Maturation Institute

Abdullah SAMANCI – Erzurum Chamber of Commerce and Industry

Adem KAYA - Erzurum Maturation Institute

Ahmet EFE – Yakutiye Youth Centre

Aydın SULUOĞLU – Ataturk University ATASEM

Ayşegül METE – Erzurum Technical University Continuing Education Centre

Esengül TANHATUN - Aziziye Şehit Birol İli Science and Art Centre

Ethem KARABULUT – Erzurum Provincial Muftiate

Feyzanur COŞKUN DİLBER – Erzurum Provincial Directorate of Family and Social Policies

Fulya ALAYBAŞI – Palandöken Social Services Centre

Gaye SAATÇİOĞLU – Erzurum Science and Art Association

Gökay ARSLAN – Remzi Seloğlu Science and Art Centre

Halil İbrahim COŞKUN - İŞKUR

Halit ŞENGÜL – Erzurum Provincial Directorate for National Education

Hanife ORHANGAZİ - KUDAKA

Hikmet SERÇEMELİ – DSİ 8. District Directorate

Mehmet Emin DAŞ – Erzurum Provincial Directorate of Youth and Sports

Mehmet GÜZELBOYACI – Açı College

Mehmet YAKUT – Dumlupınar Primary School

Melike ZEREN – DAP Regional Development Administration

Mevlana BAHŞİ - DAP Regional Development Administration

Muammer KARADAŞ - Erzurum Maturation Institute

Muhammet ÖZDEMİR – Palandöken Public Education Centre

Mustafa ERGİNCAN – Science ERZURUM

Nursel KESKİN – Science ERZURUM

Onur BÜLBÜL - TÜİK Erzurum Provincial Directorate

Özkan YETKİN – Hamidiye Vocational and Technical Anatolian High School

Rabia Arzu DALMIŞ - Aziziye Public Education Centre

Sedef YENİ - Erzurum Maturation Institute

Serkan TİMUR - KUDAKA

Süphan BÖLGE- Erzurum Provincial Directorate of National Education

Şakir AYDOĞAN – Ataturk University

Talip İÇÖZ – Erzurum Provincial Muftiate

Tolga HASTAOĞLU – TÜİK Erzurum Provincial Directorate

Ülkü DALAN – Aziziye Public Education Centre

Volkan AKKOYUNOĞLU – Yakutiye Public Education Centre

Yakup POLAT – Erzurum Metropolitan Municipality

Yusuf GEDİK – İŞKUR

STEAM PLUS PROJECT PRESENTATION

Project Title

2020-1-TR01-KA227-ADU-098071

INTERGENERATIONAL LEARNING FOR ADULT LEARNERS THROUGH STEAM: FROM THE POINT OF HOFSTEDE'S 6D MODEL (STEAM PLUS)

The Aim of the Project

Given that knowledge is constantly changing, it's critical for experts as well as ordinary citizens to update their understanding of STEAM. STEAM applications are a lifelong learning resource not only for children but also for adults of all levels. This project aims for adults to achieve the following general aims through STEAM applications.

Improve Skills

Developing lifelong learning skills and applying them in everyday life.

Problem Solving

Developing adults' analytical thinking, self-confidence, self-monitoring and social problem-solving abilities through STEAM.

Healthy Interaction

Providing healthy interaction with family members or other adults in social life.

Being Independent and Responsible

Increasing the efforts of adults to be more socially independent and responsible.

Develop Interests and Skills

Developing their interests and skills in accordance with the developing and transforming conditions.

Guidance and Supervision

Being equipped to provide guidance and supervision to others in the lifelong learning process.

Background Information about the Project

Adopting the principle of "leaving no one behind", the STEAM PLUS project aims to contribute to sustainable development with a holistic approach. Skills possessed by adults must be adapted and developed to the needs of today's world, which is constantly evolving and transforming. The main motivation of the project is to provide inclusive and quality education and to promote lifelong learning opportunities. Adaptation of adult individuals to technology and scientific facts in the digitalized world brings with it some problems in terms of time, cost or living conditions. Especially adults who have not received formal or non-formal technical education have difficulty in adapting to this process. The pandemic experienced on a global level has once again shown that these difficulties must be overcome and that humanity needs more creative thinking and behavior.

STEAM (Science -Technology -Engineering -Arts -Mathematics) applications, which provide the basic infrastructure that becomes inevitable in the personal and social development of adults, open a new way out within the framework of creative applications. Restructuring of STEAM applications, which are generally considered for children, for adults allows adults to adapt quite quickly to changing conditions. The multidisciplinary STEAM approach opens new doors for many adults with employability problems, from retirees to low-qualified individuals and disadvantaged groups. Creativity-based STEAM trainings provide adults with new perspectives in their social lives, professional lives and problem solving ability.

"Intergenerational Learning for Adult Learners through STEAM: From the point of Hofstede's 6D Model (Steam Plus)" project is a project consisting of face-to-face and online training aimed at creating a STEAM curriculum for adult individuals, funded under the European Union Erasmus Plus Adult Education Partnerships for Creativity component.

Intellectual Outputs of the Project:

- Culture and Creativity; STEAM Literacy Survey
- STEAM Module for Adults
- STEAM Plus Portal

Intellectual Output 1: Culture and Creativity; STEAM Literacy Survey

Today, STEAM applications are used in formal and non-formal education in most countries. Different ideas have been developed about what STEAM actually means. Within the scope of this intellectual output, international literature on the successes and pitfalls of STEAM training will be compiled and a STEAM information package will be created.

There is a mutual interaction between creativity and culture. In many theoretical studies, culture is seen as a catalyst for creativity. Within the scope of the project, a cultural creativity portfolio will be prepared for STEAM-oriented and partner countries. The aim of this portfolio is to examine how culture shapes creativity in partner countries and to present the current situation.

Countries carry out their STEAM activities according to their own conditions. Individuals are categorized according to their age or type of activity. From this point of view, considering that people participating in adult education may have different ages and education levels, it is thought that it would be more meaningful to make the classification according to the level of knowledge rather than age and professional experience. Within the scope of this intellectual output, a multidimensional and multicultural STEAM literacy survey will be prepared and analyzed comparatively on the basis of partner countries.

Intellectual Output 2: STEAM Module for Adults

Finding creative solutions to complex problems is seen as an important input for innovation, which is the main strength of European society. In addition, innovation is a human capacity that enriches personal life,

enables one to cope with daily challenges and promotes social solidarity. STEAM, which penetrates and feeds into every aspect of today's world, forms the basis of economic development that leads to the establishment of creative initiatives, rewarding and enrichment of careers. Transformations in the technological field have led to the emergence of intergenerational communication difficulties. In order to overcome these difficulties, an approach is needed where people of different age categories can interact and learn together. Within the scope of this intellectual output, a STEAM module (activity set) that promotes intergenerational learning will be prepared for adults. This module, which will be included in the "STEAM plus" portal, will be detailed and instructive for adults. This module, which will be created based on the "Learning by Doing" approach, will allow adults to learn and experience new things without the support of outside experts.

Intellectual Output 3: STEAM Plus Portal

Within the scope of this intellectual output of the project, an online and hybrid digital learning platform will be developed that will transform crisis periods such as pandemics into opportunities. This portal, which is constructed in an integrated structure, has the potential to develop and multiply as a first in its field. The aim is to enable individuals living in different parts of the world to share their STEAM experiences with each other. It will contain STEAM applications designed and ordered according to a systematic structure that all adult individuals can easily access. In this component, the modules produced within the scope of the second intellectual output of the project will be visualized. All kinds of content to be produced during and after the project will take place on the portal to be created within the scope of this component.

Pilot Study: A1 and A2 level STEAM training will be given to the people determined for the target audience. After the trainings are completed, the special interests of the participants in STEAM will be determined and B1 and B2 level trainings will be given to the participants according to these interests. After the B1 and B2 trainings, informative seminars on volunteering will be held. The selected group among the participants will complete the C1, C2 and D1, D2 trainings and become STEAM plus volunteers.

Duration and Budget of the Project:

24 Months / 164.934 Euros.

Partners of the Project:

- Erzurum Technical University, Turkey (Coordinator)
- Erzurum Maturation Institute – Turkiye
- Erzurum Science and Art Association,Turkey
- Experience Workshop – Finland
- Universitat Linz – Austri

WORKSHOP PRESENTMENT (November 17, 2023)

1. Speech: Prof. Dr. Hüseyin DAŞTAN | Project Coordinator

Welcome to the STEAM PLUS Closing Event programme!

We have an activity area in Mucitpark. We would like to direct you to this science and education area as soon as possible after the presentations. In the near future, we will again have a wide variety of workshops in Mucitpark.

In my speech today, first, I will briefly talk about topics such as "What was our main motivation when we started the STEAM PLUS Project? What have we done within the scope of this project? What awaits us in the future?".

What we call STEAM is actually an educational approach consisting of the initials of Science, Technology, Engineering, Arts and Maths. In traditional education, each of these modules is taught alone. For example, science, science and engineering are taught separately from each other. The education of different fields is disconnected from each other. At this point, in the STEAM approach, these parts are handled by combining them.

What is our motivation at this point? Perhaps many of your children, grandchildren or the children of people around you at primary and secondary education level participate in similar trainings. These trainings are more commonly known as robotics and coding among the public, but these trainings are actually not only about robotics and coding. Such trainings are becoming more and more widespread among children. Mucitpark or other public educational institutions and organisations organise many training programmes for young people. However, the STEAM approach is an education model that should not be limited to children. At this

point, the idea of creating an education model where individuals aged 25 and over can also gain some gains, increase their professional experience and experience and establish a strong bond with their children has been the starting point in this project. In this sense, an important deficiency has been identified both in Turkey and in Europe.

The main questions here are: Is such a curriculum available for adults? Where should an adult who wants to start this work start? What kind of a path should these adults follow? Can we guide these adults? Based on these questions, we, as Erzurum Technical University, together with our partners from Austria, Finland and Slovakia and Erzurum Maturation Institute and Erzurum Science and Art Association from Turkey, decided to transform it into a European Union project. Our project was supported by the European Union and we started our activities within the scope of the project.

Our main target groups are adults aged 25-49 and adults over 50. We were already carrying out the children's version of this training model. In this sense, we set out with the aim of preparing a curriculum for adults. Within this framework, 3 intellectual outputs were determined.

One of these intellectual outputs is culture and creativity. At this point, an answer to the following question was sought: Is there an effect of culture between such activities carried out in foreign countries and activities carried out in Turkey? In other words, does culture have an effect on creativity or innovation? We always hear the following; "Finland's education system is very successful. What kind of education system is applied in Finland? Children in Finland are very successful." Do these achievements stem from a cultural awareness? Is it due to our perspective on the education system? From this point of view, we tried to understand whether there is a difference in Austria, Germany, Finland, Slovakia and Turkey due to cultural factors. For this, we prepared a portfolio and tried to understand these differences between countries on the axis of various problems. Then we created a STEAM Literacy Questionnaire. Yes, we hear STEAM all the time, we will hear it even more in the future. Maybe in the next 10 or 20 years, this concept will be a part of our lives.

Nowadays, technology is advancing so fast that when you go to bed at night and wake up in the morning, we are faced with a new application. Children of this period are born in a digital age and grow up in a wide variety of digital technologies. Therefore, the language they speak and the language we adults speak should be the same so that we can establish a solid communication.

Our children no longer play the games we played 30 years ago. They do not continue their lives with the discourses we used years ago. Children start to ask us questions through a computer game they play. If a

child is developing something on Arduino, he talks to you about it or starts talking about artificial intelligence. They want to talk to us about something they see on social media. If we, as parents, guardians and adults, cannot respond to these questions, after a while our bond with children will start to break. This is not only the problem of a mother or father, but also of a grandfather, grandmother or great-grandmother who has retired in their sixties.

So, how can we use STEAM to make this connection? If we educate adults, will different generations enjoy doing activities together more? I also experience these issues with my own children. The permanence of the activity we do together and the happiness it creates in them is more. Yes, we are all very busy in our daily lives, we have many things to do. But on the other hand, we also think about whether we can underline spending quality time together. In other words, is it possible to build a bridge by educating adults as well?

At this point, with the STEAM Literacy Survey, we are trying to understand what level we are at in STEAM fields. The things mentioned here are definitely not utopian. Let's say that in Mucitpark, a child in the second grade of primary school can do three-dimensional modelling or write code at a simple level. Now, a 40-year-old can do this even more easily.

At this point, we are trying to show the following: A student in the sixth grade can do a drawing question given in the third year of engineering. At this point, we are trying to create a similar motivation in adults. For this, we first create a literacy questionnaire. You may not have heard of the concepts in question before. Therefore, we are trying to understand how much you have heard. This process is currently ongoing.

After creating the questionnaire in question, we realised a module together with our partners. In other words, we divided the trainings into courses as A1, A2, B1, B2, C1, C2. Thus, after the basic level consisting of A1 A2, B1 B2, we will have the opportunity to direct you to an area of expertise you want.

If you say "I am not good at science in STEAM, but I want to improve myself in the field of art", you can perform the C programme through art. All our partners prepared this module. Then we transformed them into a single format and placed them on the STEAM PLUS Portal, which is the third intellectual output of the project. As of the end of the month, every adult who goes to www.steameu.org will know where to start, which activities to do to finish A1, which activities to do to finish A2 and how to advance these trainings. You will be able to access all the documents related to this education on this site. On the site in question, you will be able to find out how to do each activity, what are the necessary materials for the activity, what will be the gains of you or your children during that activity with Turkish and English options.

We are nearing the end of the project, but we recognise it as a beginning. One of the outputs of this project is to establish a volunteer network. This volunteer network will work as follows: In the coming period, we will start adult trainings in Mucitpark just like children's trainings. Based on the outputs of this project, we will now add adults according to these modules. For individuals who have received these trainings, we are establishing a volunteer network on the STEAM portal. So you are saying: "I want to be useful to this society. There are 10 children around me. I have received A1 trainings. I can give these A1 trainings to 8 or 10 children." Or "I am very talented in art. I work, I produce, I can give trainings on this subject." You enter the portal. You make a definition on the portal. After specifying on which day, at what time and where you are available, you provide training at a place you determine (Erzurum Technical University or any school of your choice). We, as the STEAM PLUS team, accredit this training. In other words, we approve your application. When we approve this application, this training becomes available for all children and adults.

We always have a motto: We do not provide superficial and tokenistic training. For example, if our volunteer is going to give A1 training, he/she divides it into weeks. Some of it is given this week, the other parts are given in the following weeks. In other words, while the child follows the trainings online or face-to-face through the portal, he/she must complete the whole process so that he/she can receive a certificate. Why do we do this? Because STEAM trainings are expensive trainings. In other words, establishing a STEAM workshop requires a really big cost today. It is really difficult for each school, each individual to establish such workshops in their own field. It is also very difficult to find trained staff in this field. For example, in Mucitpark, this training system is realised with 50 people. Therefore, what we want to do here is for all of you to take part in this work.

This project is a social responsibility project. At the end of the day, we are able to train 400 students in Mucitpark. But why shouldn't this number be 4 thousand? Adults and all children in this city, that is, everyone who wants to (whether for hobby purposes or to increase their professional experience or experience), should benefit from these opportunities.

We are just starting this journey with our volunteer network. First of all, we have established the system, we will walk this path together with the trainers we will receive in the next period. Of course, we want you to have more volunteers, we want to have more manpower to contribute to this work. You are here today, but you can direct the people around you who are interested in this work to this project. You may have a retired father, uncle or uncle sitting at home. The main goal is to tell something to adults who really want to do something, who love children, to establish a social relationship with them and to gain them some gains.

Within the scope of today's programme, we conducted a pilot training within the project. We conducted a pilot application for a group of 20 people to understand the effectiveness of these modules and trainings and to see if there are any problems and to get feedback. We will soon have a certificate ceremony for our adults who participated in this pilot programme. In addition, as part of the closing event, we organised an idea competition for a week and we held the final of this idea competition last night. Will there be new ideas on this subject? How can we continue where we left off? We are looking for answers to these questions. In this context, our young friends worked day and night for a week and came up with very good ideas. Today there will be an award ceremony for the first, second and third prize winners.

Afterwards, we will welcome you all at our small but effective experiment stands that we have prepared for you. We would especially like you to participate in these experiments. We know that you can understand something better when you touch it, when we experience it. So we need to try these experiments for this. We will offer you more such opportunities during the semester.

Finally, we questioned what can be done about the integration of STEAM education into adult education within the scope of intergenerational education. We organised a workshop by bringing together all adult education institutions and STEAM education institutions in Erzurum. Our aim was this: We all actually have some duties as public institutions and private sector. We are trying to fulfil them. But on the other hand, the age is changing, technology is changing. Are we as educators really ready for these changes? Can we act together in this field? Can we act together on the integration of STEAM into adult education? Can we popularise STEAM trainings? We did a brainstorming on these issues and the results of the workshop will be presented to you today by Assoc. Prof. Dr. Burak BAŞKAN.

As of the end of this month, you will be able to access all of the training content mentioned here free of charge via www.steampluseu.org. All trainings and contents to be provided within the scope of this portal are completely free of charge. You can use this portal as you wish. Apart from this, you can also provide feedback to us through this portal. If there is anything we can do for you or anything you suggest us to change, we will welcome it. In fact, we need your support in order to improve it.

Thank you all!

2. Speech: Assoc. Prof. Dr. Burak BAŞKAN | Project Expert | Erzurum Technical University

Dear participants, welcome to you all!

Representatives of all institutions in Erzurum that are directly or indirectly related to intergenerational education gathered around a round table. In this workshop, they exchanged ideas on both Turkey's general education problems and local education problems specific to Erzurum. A final report consisting of many solution proposals has emerged. I will try to present this final report to you today.

When we look at the general state of education in Turkey, the first thing that emerges is the cognitive gap between parents and children, which is also the reason for the emergence of the STEAM PLUS project. As experienced in daily life, the new generation is introduced to tablets, computers and smart mobile phones as early as the age of 2 or 3. However, the generation in their 40s had access to these technological devices much later. In other words, these generations also experienced a life in which technology did not take up much space in their lives. Therefore, the distance between children and young people is widening.

The consequence of this situation is that parents and their children are almost worlds apart. How can this negative situation be eliminated? In fact, the STEAM PLUS Project is a project that has emerged in order to answer exactly this question and is already serving this purpose.

Another important observation is that education in Turkey is very theoretical. In other words, theoretical education cannot be supported by practical training. There is a sentence that everyone is familiar with: "Education in Turkey is based on rote learning." The theoretical part is also given in the form of memorisation. Children memorise all the information until the exams and after the exam they forget all the information they have memorised. In other words, almost no information is left for today. Therefore, education must be given with a practical method. At this point, Mucitpark performs a very important function.

According to another observation, vocational education in Turkey is quite inadequate. Vocational high schools are seen as places to be attended by force or out of necessity. Vocational education is not considered very important. All young people try to graduate from regular high schools. As it is well known, straight high schools do not add anything to young people who cannot go to university in the vocational sense. For example, in an environment where everyone is a civil engineer or a computer engineer, who will do the job of a technician? Therefore, there is a serious need for intermediate labour in Turkey and this need cannot be met. The most important reason for this is that vocational education is not qualified. Therefore, vocational

education needs to take a step forward in Turkey. In this sense, STEAM PLUS Project fulfils a very important function in terms of providing vocational training to young people and adults.

One of the important findings of the workshop is related to the current cognitive status of educators. A significant number of educators have been raised with traditional education. However, new generations are growing up with completely different education methods and technological opportunities. Therefore, educators need to constantly update and improve themselves. On the other hand, educators in Turkey unfortunately have a problem of not being able to update themselves. They try to approach children who perceive life in a completely different way from themselves with traditional methods.

Moreover, unfortunately, in Turkey, both universities and various vocational courses are seen only as places to obtain a diploma or a certificate. A diploma or certificate is actually a proof of the education received and the qualification obtained as a result of the education. However, it has come to such a situation that obtaining a diploma or certificate has become a goal in itself. What has been learnt as a result of education is no longer important. For example, many students suffer from absenteeism in various courses. In other words, it is not very important for these students to learn something. The only goal is to graduate and get a diploma.

What are the problems of education in Erzurum? First of all, the physical conditions in many schools are not suitable for creating a laboratory. There are good schools in this sense, but their number is not high. Therefore, it cannot be said that all schools in Erzurum have such facilities. In this sense, it is very important to increase the physical facilities of schools. There is a great inequality between schools. Many parents here try to send their children only to certain schools. They do not want their children to go to certain schools. Therefore, all schools should be equal in terms of equal opportunities.

In addition, adults in Erzurum do not show much interest in science and technology. These people are obliged to be interested in science and technology only to help their children. In other words, there is no voluntary interest. Since they do not have such motivation, they definitely do not want to receive training related to science and technology. At this point, the STEAM PLUS Project aims to direct adults to scientific education. In this sense, the project is very important. In addition, the livelihood concerns of families are also an important determinant in technology interest. Many adults come home quite tired. After that time, education becomes a luxury for these people. We need to direct this interest to science and technology. Because life is changing. Everyone has a profession and new technologies are emerging in that profession. Therefore, parents also need to advance in science and technology.

In addition, there are serious problems in the communication of educational institutions both with each other and with the society. Therefore, it is necessary to establish a better communication both with other institutions and with the public. In particular, ways should be sought to improve the informal communication between institutions (i.e. besides the communication arising from legal regulations).

So, how are the institutions in Erzurum doing in terms of intergenerational education? In other words, are there any activities related to adult education in Erzurum? At this point, the common determination of many representatives of the organisations participating in the workshop was as follows: Institutions in Erzurum generally provide adult education only for their own employees. However, unfortunately, there are no organisations that carry out many training activities for people outside the organisation.

There are also good examples: One of them is İŞKUR. Within the scope of a European Union project, İŞKUR carries out a training activity for young people who are not currently in education or employed. In this sense, this project is very important. In addition, İŞKUR carries out research to determine the current skills of adults, to identify their competences and to find out what kind of training they will need. This research tries to measure how interested our adults are in science and technology. Identifying these points is the first condition for designing an adult education curriculum. In other words, what is our current situation? First of all, this point needs to be determined so that a new and original education programme can be designed.

In addition, the Ministry of Family and Social Services has a communication programme between parents and children. In Erzurum Chamber of Commerce and Industry, it has been stated that all kinds of support will be provided for adult education, especially in the chamber assemblies, and that the organisation has this infrastructure. Erzurum Provincial Mufti's Office, on the other hand, already provides awareness-raising trainings for fathers and fathers-to-be. As Prof. Dr. Hüseyin DAŞTAN stated, Mucitpark trainings also assume an important responsibility in terms of adult education.

Finally, what are the suggestions for solving the problems just mentioned? First of all, one of the main objectives of the STEAM PLUS Project is to train the educational leaders of the future. It is very important to raise leaders who can pioneer education. In this way, education will be able to spread throughout the society.

At this point, one of the important suggestions is to create a needs map for adults. As a result, each adult's relationship with technology is different from each other. Some work in a profession that is more intertwined with technology. Others have no interaction with technology in daily life. Therefore, it is one of the important

suggestions that a needs map should be drawn up and training for adults should be shaped according to this needs map.

In addition, the failure to publicise trainings for adults is a serious problem. As an adult, you want to receive training in any field. In this case, how can you know where and when various training opportunities are offered? Currently, there is no platform where you can access them. Therefore, the creation of these platforms is an important step. Just as there are platforms that inform on which days cinemas and theatres are open, it is essential to create similar platforms for adult education.

In addition, many organisations draw attention to the legal and bureaucratic barriers to adult education. It is necessary to remove all kinds of obstacles in the field of adult education and to make the processes as fast and simple as possible. In particular, public institutions need to have a wider scope of action. Barriers to communication between organisations, especially informal communication, need to be removed.

It is essential to establish design, science and technology workshops in many educational institutions in Erzurum, especially in universities. These workshops will fulfil many of Erzurum's needs. In particular, it will be a very important step in terms of providing STEAM trainings in Erzurum.

Designing spaces where education can be integrated into life is another important issue. In many Western countries, we see that cities are built around universities and various educational institutions. For example, Oxford University in England was established in the centre of the city of Oxford. The whole city was built around this educational institution. In other words, education is at the centre. We also need to integrate our educational institutions into life. In other words, there should be areas around an educational institution where different projects and activities can be realised.

In addition, the Ministry of Youth and Sports is currently building a camp in Kandilli. This camp is very important in terms of organising camps where parents and students can receive education together in the future.

Finally, the Governorship of Erzurum is trying to make a significant contribution to adult education and intergenerational education with the 'Lifelong Learning Project'. In this way, a framework is drawn for intergenerational education. Other educational institutions in Erzurum should also focus on intergenerational education in coordination with the Governorship of Erzurum.

We hope that the STEAM PLUS Project will fulfil a very important function for you to receive adult education in the near future and to minimise the distance between you and your children.

Thank you all for listening to me!

STEAM PLUS WORKSHOP OUTPUTS

The target audience of the Intergenerational Education Workshop is public institutions, academics and non-governmental organisations in Erzurum. The main goal of the workshop is to create a common mind on the transformation that is and should be experienced in adult and child education with increasing globalisation and simultaneously developing technology. Participants from 35 organisations took part in the workshop. In the workshop where focus group work was determined as a method, round table discussions were held with 6 focus groups around semi-structured questions.

The semi-structured questions in the focus group study are as follows:

1. What are your findings about the situation of child and adult education in Turkey in general?
2. What are your findings about the current situation of child and adult education in Erzurum and Erzurum's educational institutions?
3. What are the main determinants of adult and child education?
4. How can the increasing gap between generations in cognitive terms be closed?
5. How can adult education be differentiated in the age of technology?

Thus, the governance model presented in the workshop aimed to clarify two main points: What are the main problem areas in intergenerational education? What can be done to design and manage intergenerational education more effectively? At this point, it is important that participating institutions and organisations put forward their suggestions for solutions.

The main problematic areas in intergenerational education in Turkey that emerged from the workshop are as follows:

• The cognitive gap between parents and their children is increasing.
• Education in Turkey is too theoretical. The practical aspect of education is ignored.
• Vocational education is insufficient in Turkey.
• Although educators are trained with traditional education, they have to give new generation education.

- Educational institutions are seen only as institutions to receive diploma/certificate.

The main problematic areas in Erzurum that emerged in the workshop on intergenerational education are as follows:

- The physical condition of many schools is not suitable for workshops and practical courses.
- There is inequality between schools.
- The interest of adults cannot be directed to subjects such as science and technology.
- An important obstacle to adult education is that families are worried about their livelihood and see adult education as a luxury.
- Educational institutions cannot communicate with the society.
- Educational institutions cannot communicate with each other.

The main problematic areas in Eruzurum institutions related to intergenerational education are as follows:

- Many organisations carry out training activities for their own staff.
- In the field of training, İŞKUR has implemented the NEET PRO European Union project.
- The Programme for the International Assessment of Adult Competences (PIAAC) is conducted by İŞKUR across Turkey.
- Erzurum Provincial Directorate of the Ministry of Family and Social Services carries out trainings that build communication bridges between parents and children.
- Erzurum Chamber of Commerce and Industry is equipped to take all kinds of decisions on adult education in the chamber assembly and to ensure the contributions of all members.
- Erzurum Provincial Mufti's Office provides trainings on child development for prospective or current fathers.

During the round table discussions, after brainstorming on problematic areas and assessing their own organisational capacities, all participants proposed solutions to improve intergenerational education. The main headings of these solution proposals were determined as follows:

- It is important to train education coordinators and leaders who can lead adult education. In this sense, trainers should be trained first.
- It is necessary to map the needs of adults and determine the participants accordingly in the first stage. Otherwise, the problem of not being able to direct the people who really need STEAM trainings to the training processes will arise.

- Platforms should be created to publicise adult trainings to the society. Just like the announcement of concerts, exhibitions and theatre plays, every new training opportunity should be announced to people.

- Bureaucratic and legal obstacles in front of the institutions to provide adult education should be removed and the processes should be facilitated as much as possible especially for the institutions providing education.

- It is important to ensure communication and co-operation between institutions. For this, both public and private institutions should act in coordination and establish communication networks.

- Design, science and technology workshops should be opened throughout Erzurum. In this way, both adults and children should be able to develop themselves in the areas they are interested in.

- It is important to design spaces where education can be integrated into life. Educational spaces and social spaces should be intertwined. Thus, people from all generations will be able to access education together and easily.

- It is necessary to establish short-term camps where families and children can participate together in nature camp centres to be built by the Ministry of Youth and Sports Erzurum Provincial Directorate in Kandilli. In this way, state support for intergenerational education can also be obtained.

- Coordination should be ensured with the 'Lifelong Learning' project implemented by the Governorship of Erzurum. In this way, the Governorship will be able to pioneer intergenerational education institutionally.

- Turkey's established bureaucratic structure should pro-actively utilise more effective good governance methods. The bureaucratic system should be structured in a way that allows better communication and faster data sharing between organisations on intergenerational education.

- It is vital to address the differences between different organisational regulations that make the management of intergenerational education difficult. Each city in Turkey has a different educational experience. Therefore, locally oriented governance of intergenerational education should be realised. A strong relationship between local people and trainers should be established according to local priorities.