

SUPPORTING AUTONOMY IN A TECHNOLOGY - MEDIATED ENVIRONMENT

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Partners



Table of Contents

INTRODUCTION.....	5
SUPPORTING AUTONOMY IN A TECHNOLOGY-MEDIATED ENVIRONMENT	7
METHODOLOGY	10
RESEACH FINDINGS	11
Level of digital awareness.....	11
Participation in Educational process.....	13
Interest in engaging in training activities: preferred methods and tools.....	15
What are the barriers to acquire new knowledge?.....	16
Preferred ways of learning.....	18
CONCLUSION.....	20
Bibliography.....	22
Complementary bibliography	22

SUPPORTING AUTONOMY IN A TECHNOLOGY-MEDIATED ENVIRONMENT

Summary

This report is part of the implementation and dissemination activities within the KA204 ERASMUS+ Strategic Partnerships for adult education: Adult Self-Learning: Supporting Autonomy in a Technology-Mediated Environment, project number: 2019-1-TR01-KA204-076875. This report has been divided in two parts. A desk research with emphasis in collaborative learning implementation in Adult education in Poland and the field research.

The desk research and field research was prepared within IO1 objectives: Definition of an operative model for teaching-learning low qualified adults in an online environment - months 1-6. [ASL project, Application form, p. 49]; “project impact indicator: measured through a survey based on structured interviews with key stakeholders (IO4) [ASL project, Application form, p. 67].

The same research structure has been implemented by Saricam Halk Egitimi Merkezi - Turkey, Adana Bilim ve Teknoloji Universitesi - Turkey, Fundacja Instytut Badan i Innowacji w Edukacji - Poland, Ecoistituto del Friuli Venezia Giulia - Italy, Three Thirds Society - Greece, Rezeknes Tehnologiju Akademija – Latvia, partners of the “Adult Self-Learning: Supporting Autonomy in a Technology-Mediated Environment [ASL] project”.

„KA204 ERASMUS+ Strategic Partnerships for adult education: Adult Self-Learning: Supporting Autonomy in a Technology-Mediated Environment, project number: 2019-1-TR01-KA204-076875”

INTRODUCTION

The objective of this IO is comparing the variety of online learning approaches for low-qualified and low-skilled adult learners in order to realize an operative model that will be applied for the project training activities. This IO is motivated by the need to build a share model and exploit the expertise and experience of partners.

The dynamic development of information and communication technologies affects the spread of modern forms of adult education, including:

- e-learning,
- blended learning¹
- mobile learning².

Expanding the picture of the use of modern technologies in adult education can be highlighted ³:

- **Distance learning** (d-learning) – the broadest term in terms of meaning, because it covers both correspondence teaching, television and radio forms, as well as all e-learning. In translation into Polish, distance learning means: teaching / learning / distance learning, teaching / learning / distance learning.
- **E-learning** – (e-learning, e-learning / e-learning) - distance learning form; otherwise - teaching via the Internet using personal computers or portable wireless devices - smartphones, tablets, laptops (mobile learning / m-learning). E-learning gives us the opportunity to learn what we need at the moment, in a place that suits us best. We can process educational material at our own pace.

There are two modes in e-learning::

- **synchronous**: classes with a trainer in a set real time in the so-called virtual classes - virtual learning (video conferences, webinars). Meetings can be recorded, shared, edited, analysed.
- **asynchronous**: training / activities / resources are embedded in the e-learning platform. The participant may visit them at his convenient time.

¹ Vaughan, N. (2007), Perspective on Blended Learning in Higher Education, „International Journal of E-Learning”, nr 7 (1), s. 81–95

² Mikołajczyk, K. (2013), Słów kilka o e-learningu w SGH, „Gazeta SGH”, nr 9/13 (297), s. 29–30

³ <https://www.e-learning.pl/ewiedza/distance-learning-e-learning-blended-learning-czyli-co-jest-czym>

Contact with the trainer or other participants of the e-training involves taking part in discussions on the forum or chat or e-mail correspondence.

As part of e-learning itself, there are different variations, e.g.

- **micro-learning**, that is, various kinds of small portions of information (Facebook post, Tweeter, Instagram photo, blog post, YouTube tutorial, e-learning pill, animation, infographic).
- **Video-learning** (v-learning) may be a type of micro-learning, but it doesn't have to be. It can be safely stated that nowadays video is the most common and ubiquitous form of communication. Most young people use podcasts or "How to do ...?" Tutorials to gain new knowledge or skills. available on YouTube.
- **Audio-learning**. These are all kinds of audio recordings that you can listen to, e.g. while driving. This form works perfectly, among others in teaching foreign languages.
- **digital learning** – teaching / learning supported by digital technologies, e.g. electrical content carriers (e-books), e-learning platforms (Moodle) or training creation programs.
- **Blended learning** (b-learning) - mixed / hybrid learning - is a didactic process that is implemented partly in a traditional way (direct contact with the trainer in the lecture hall), partly via the Internet e-learning platform. Given the specificity of blended learning defined in such a way, its linguistic significance goes beyond such a broad concept as distance learning.

Adult education is becoming a discipline that uses intelligent e-learning systems, developed with the use of tools to adapt the transmitted didactic content in an automated manner, taking into account both the path of education planned by the teacher and the actual progress of the learner. It can be assumed that in the next stages of adult learning development there will be a transformation towards the use of augmented reality in education. Currently, elements of virtual reality are used in the education programs of prestigious universities around the world, enabling, among others architecture students look at the designed space from the perspective of the disabled person or medical students conduct simulations of operations⁴

⁴ Raport Edu-Tech, Nowe technologie w świecie edukacji, 2016, [edutorial.pl/wp-content/uploads/2016/09/raport-edu-tech-2016.pdf](http://wp-content/uploads/2016/09/raport-edu-tech-2016.pdf)

SUPPORTING AUTONOMY IN A TECHNOLOGY-MEDIATED ENVIRONMENT

Currently, elements of virtual reality are used in the education programs of prestigious universities around the world, enabling, among others architecture students look at the designed space from the perspective of the disabled person or medical students conduct simulations of operations.

The dynamism of economic processes, including the increasingly common phenomenon of "capital migration", meant that in order to ensure high competitiveness of the economy, an ever stronger emphasis is placed on the quality of human capital and the level of mastery of basic skills by employees. As a result, the European labour market is evolving towards better quality and more productive jobs, requiring continuous improvement and adaptation of qualifications to the growing requirements of employers. The consequences of these changes are felt above all by low-skilled workers [PARP, 2009].

Unfortunately, Poland belongs to the group of EU countries with the lowest rate of adults with at least secondary education, although the data show an improvement in the value of this indicator. This group also includes: Greece, Croatia, Spain. Available Eurostat data also show that young adults are more likely to have high school level qualifications than older people. Compared to people aged 55-64, the percentage of people aged 24-34 having secondary education is even higher by 20 points. proc. [Maniak, 2015].

The directions of lifelong learning policy, including adult learning, are quite clearly outlined in Poland. They are defined by both strategic national documents, including above all the 'Lifelong Learning Perspective' as well as European Union documents, including the 'Europe 2020' strategy and the 'Council Resolution on a renewed European agenda for adult learning'. The problem is not the lack of a strategic vision for the development of adult learning, but the difficulties with the operational implementation of the objectives indicated in the strategies. The causes of these difficulties can be of various types. One of them may be the fact of the complexity of the issue and its location on the border of the competences of various departments: education, higher education, economy, work and social policy.

The inter-ministerial nature of the issue is conducive to the dispersion of responsibility, which in turn hinders the effective management of this area.

The difficulty is that adult learning policies must take into account the diversity of the occupational and life situation of citizens and the different needs, opportunities and expectations associated with them.

On the one hand, it should create the best conditions for multiplying already developed competences, increasing the chance for professional development, on the other, it must take into account people with the lowest competences and equally low development opportunities. However, the effectiveness of actions in this area depends on many factors that are difficult to influence, e.g. the macroeconomic situation, the specificity of local labour markets or, finally, culturally conditioned behavioural patterns, individual action strategies, cognitive patterns and motivations. The complexity of this area may explain why in Poland, which is becoming more and more successful in the field of school education, comparable results in the area of adult learning are not being achieved.

The low position of Poland among European countries in terms of the level of educational activity of adults should, however, motivate to an even more careful analysis of the conditions of the situation in this area and a more careful design of actions aimed at its improvement. It seems that the rank of adult learning and its importance in Poland is still too low in relation to the role it can play in dealing with the challenges of the labour market and the role that is assigned to it in European Union policy. This is a consequence of many years of dominance of formal education, also in the area of adult learning and the lack of traditions related to changing qualifications and acquiring new ones in a non-standard way, except for school education.

In the meantime, lifelong learning and skills development are recognized in the Europe 2020 strategy as key elements in responding to the difficulties facing Europe, in particular the economic crisis and the demographic crisis. It is also emphasized that lifelong learning can significantly support the achievement of the goals of the Europe 2020 strategy, as it enables better use of human capital. This is especially important for those who have been affected by unemployment, restructuring or the need to change their profession. It is equally important for employees with low qualifications or for the elderly, as it facilitates adaptation to changes in the labour market and in social life (Polish labour market - challenges and directions of activities based on the Human Balance study 2010-2015).

Educational passivity of people with low competences is one of the biggest problems related to the development of human capital in Poland. This passivity is accompanied by professional deactivation, occurs among people with low

competences, reducing the chances of returning to the labour market or adaptation to the new situation, and increasing the risk of poverty and social exclusion. It has a diverse background, it is often fixed, coexists with the belief that you are unable to learn and change your position. At the same time, as the BKL research shows, it is among disadvantaged people (with a low level of education, professionally inactive) that there is a significant improvement in self-assessment of competences, especially in the case of IT and self-organization competences related to manifestation of initiative, i.e. competences that are crucial for adaptability to technological or organizational changes. This result should be treated as a key argument in favour of seeking ways to broadly integrate disadvantaged people into the lifelong learning process (Polish labour market - challenges and directions of action based on the Human Capital Balance 2010-2015 study).

The skills of the 21st century are based on the ability to use digital technology which is associated with the ability to use media and information [Ferrari 2012]. The rapid process of technology diffusion, including its spread in private (personal) use, changes the perception of technology. Expanding fields of technology use generate both opportunities and opportunities as well as a source of requirements for members of society. Having digital competences at a satisfactory level is becoming a key condition for not being in the position of a digitally excluded person. Digital competences in modern society should be seen as the basic competence of a person functioning in society [Bawden, Vilar 2006]

METHODOLOGY

Research and Innovation in Education performer the desk analysis on the current literature by analysing online databases and selected scientific journals, focusing on project and initiative promoted in their country. The desk analysis was based on PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) methodology. INBIE collected statistic data only by official sources and scientific surveys.

For the field research we used the survey method, The questionnaire was part of the IO1: Definition of an operative model for teaching-learning low qualified adults in an online environment - months 1-6. [ASL project, Application form, p. 49]; “project impact indicator: measured through a survey based on structured interviews with key stakeholders (IO4) [ASL project, Application form, p. 67].

The objective of “self-learning: supporting learning autonomy in a technology-mediated environment” – ASL project are:

- To teach learners to acquire new skills and competences using learning innovative practices and digital technologies;
- To develop a functioning collaborative learning environment to help them identify skills gaps and needs and to collaborate locally and independently for joint capacity-building.

The objective of the output: An operative model for teaching-learning low qualified adults in an online environment [IO1] is comparing the variety of online learning approaches for low-qualified and low-skilled adult learners in order to realize an operative model that will be applied for the project training activities. This IO is motivated by the need to build a share model and exploit the expertise and experience of partners. [ASL project, Application form, p. 74].

RESEACH FINDINGS

The age of the interviewed stakeholders are divided in four groups.

- Adult educators 65+ with a 33,3% of respondents
- 46-55 years old with a similar rate 33,3%
- 56-65 years old has a 25% of respondents
- And the last group are adult educators with the age between 25-35.

100% of the enquired adult educators live in Czestochowa, that is a City in the Silesian region with about 200.000 inhabitants. Czestochowa last known population is \approx 230 100 (year 2014). This was 0.596% of total Poland population⁵.

Concerning the household income they are divided in four groups:

- 33.3 % affirm to have much lower than the average
- 25% would have slightly lower than average
- 25% Average
- Only two people that would be 16,7% of the target group says that has slightly over than average

This data confirm the theory that Adult Educators group working as a volunteers are philanthropist and even though they do not have a high household income, they give what they have: Knowledge.

The answers are varied and can be divided in four main groups:

- 16.7% has attended Vocational school / College
- 58.3% of the Adult educators enquired has a “Master” degree
- 16.7% have a PhD degree
- 1 person prefer not to say that correspond to 8.3% of the total.

Level of digital awareness

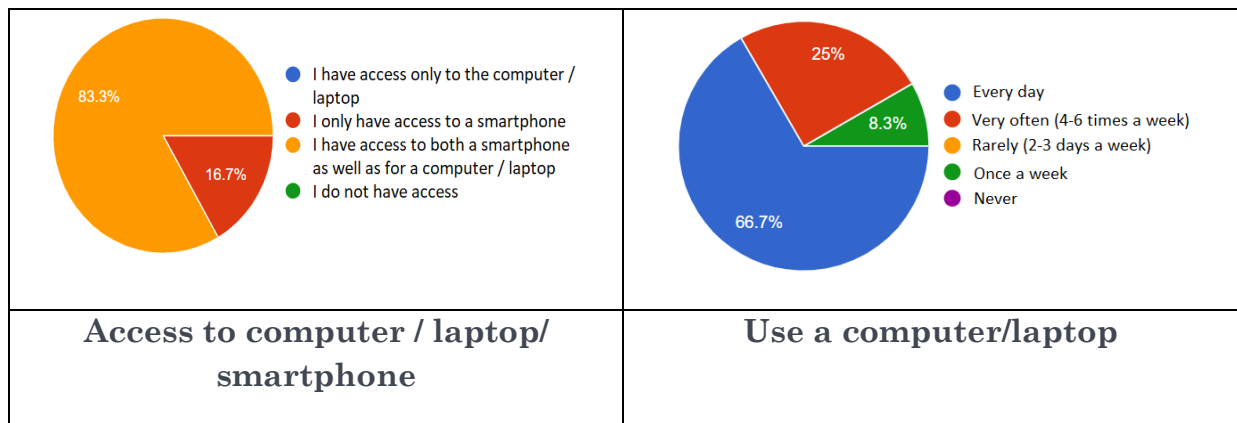
Digital competence is a set of knowledge and skills that are required when using information and communication technologies and digital media to perform tasks, solve problems and communicate at work, in free time, during learning and

⁵ Czestochowa population: <http://population.city/poland/czestochowa>, retrieved from 21.04.20202

meetings. DigComp identifies the key elements of digital competence in 5 areas that can be summarized as follows⁶:

- Ability to use information and data
- Communication and cooperation
- Creating digital content
- Security
- Troubleshooting

In our research, we try to know which devices our target group have access to be able to implement in a better way ASL project objectives, taking into account the Digital Competence framework for Citizens (DigComp).



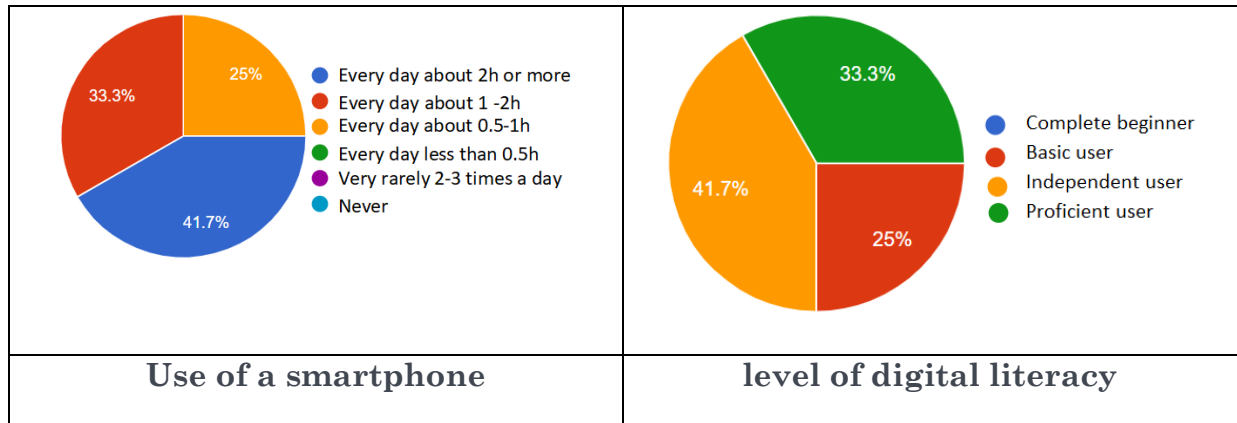
Access to a device with access to internet is very important for any online courses to be developed within ASL project. Our target group can be divided in two main groups:

- 16.7% of respondents has access only to a smartphone
- 83.3% have access to both devices, smartphone and computer/laptop

When asked about the frequency of the use, the answers are:

- Daily 66.7% (that is 8 participants of 12)
- Very often - 4-6 times a week – responded 25%
- Once a week 8.3% that is 1 person

⁶ The Digital Competence Framework, <https://ec.europa.eu/jrc/en/digcomp/digital-competence-framework>. Retrieved 22.04.2020



How they use smartphones can be divided in three main groups:

- 41.7% of the respondents (5 people) uses smartphones every day about 2 hours or more
- 33.3% of the target group uses smartphones every day, about 1 -2 hours
- 25% uses every day between 0.5-1h

100% of the surveyed population uses Internet for searching information

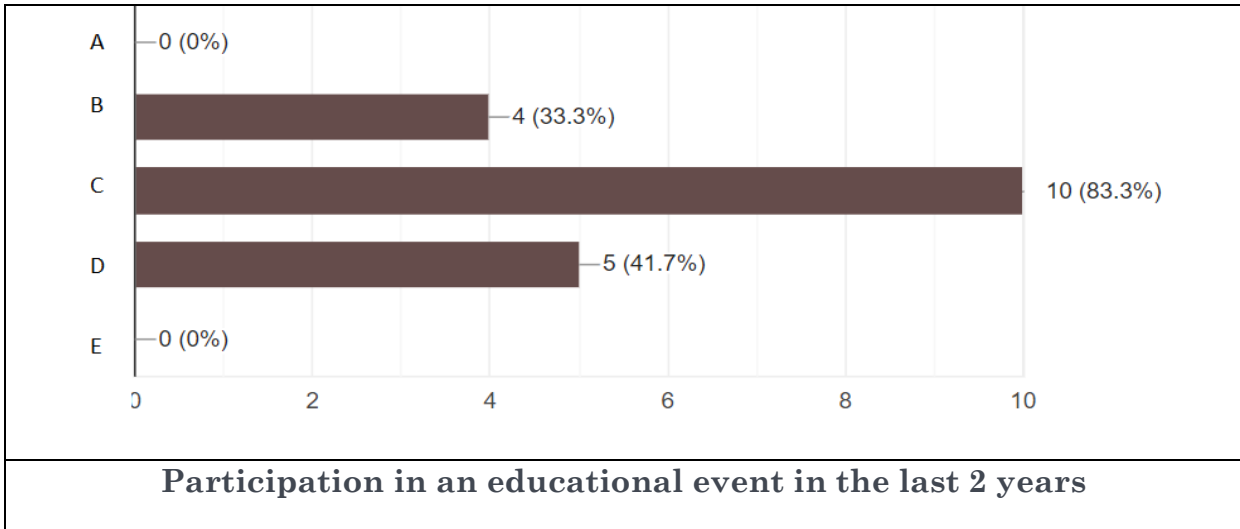
Level of digital literacy:

- 41.7% says that can be defined as an Independent user: able to use different search engines to find information online and use online services such as public services, e-banking, online shopping, Word/Excel
- 33.3% confirm that is a Proficient user: able to assess the validity of information online, actively uses a wide range of communication tools, produces multimedia content in different formats, use digital platforms, tools and environments
- 25% can be defined as a basic user: able to search, use a mobile phone or e-mail, share files and content online

Participation in Educational process

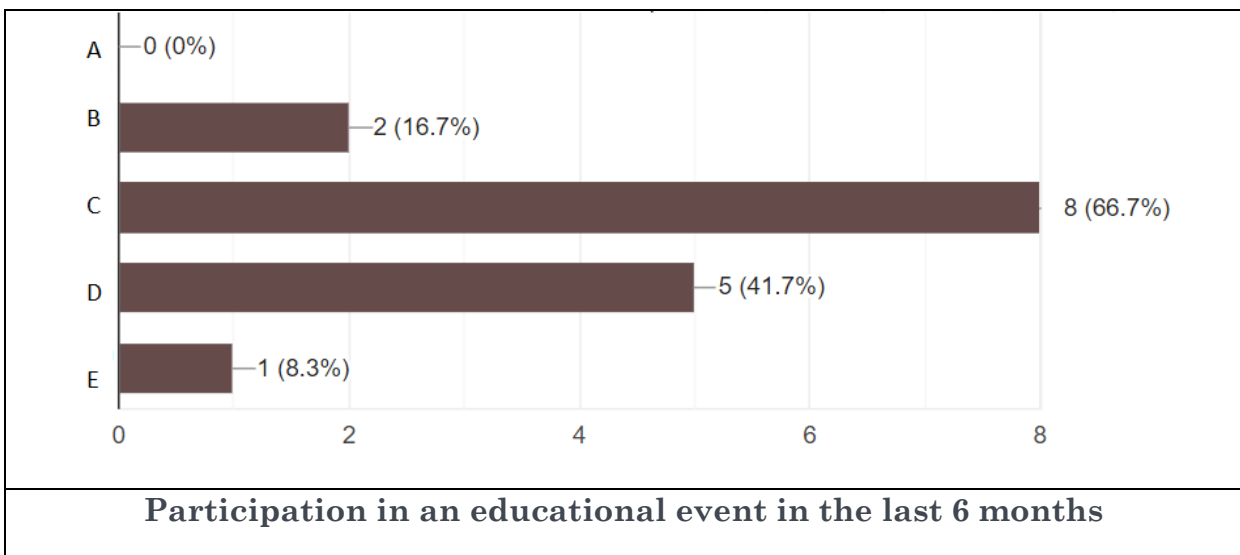
To be able to plan the educational processes and the lessons themselves requires a thorough knowledge of the core curriculum of their own subject and related subjects, view content and tasks. It also requires constant reflection on the actions taken. That is why it is so important to assess the effectiveness of actions taken and evaluate the lesson. Constant modification of plans based on conclusions and recommendations from self-evaluation will increase the effectiveness of the educational process.

Before planning the educational process, we would like to analyse if the group has participated in educational events in the last 2 years and in the last 6 months.



To the question if they have participated in an educational event in the last 2 years, 83% of the participants to the survey choose [C]. Participants declare that have non-formal education (supervised by professionals in handicrafts, language, IT, physical activity etc.), 41.7% of the surveyed group [D] state has informal/self-learning (YouTube, Social media, books, etc.)

33.3% [B] has some formal education (post-graduate qualification courses)



To the question if they have participated in an educational event in the last 6 months, 66.7% of the participants to the survey choose [C]. Participants declare

that have non-formal education (supervised by professionals in handicrafts, language, IT, physical activity etc)., 41.7% of the surveyed group [D] state has informal/self-learning (YouTube, Social media, books, etc.). 16.7% [B] has some formal education (post-graduate qualification courses). 8.3% choose [E] - No, I didn't learn anything last 6 month

In general we can proclaim that most of the Adult Educators had some non-formal education courses (supervised by professionals in handicrafts, language, IT, physical activity etc.).

Interest in engaging in training activities: preferred methods and tools

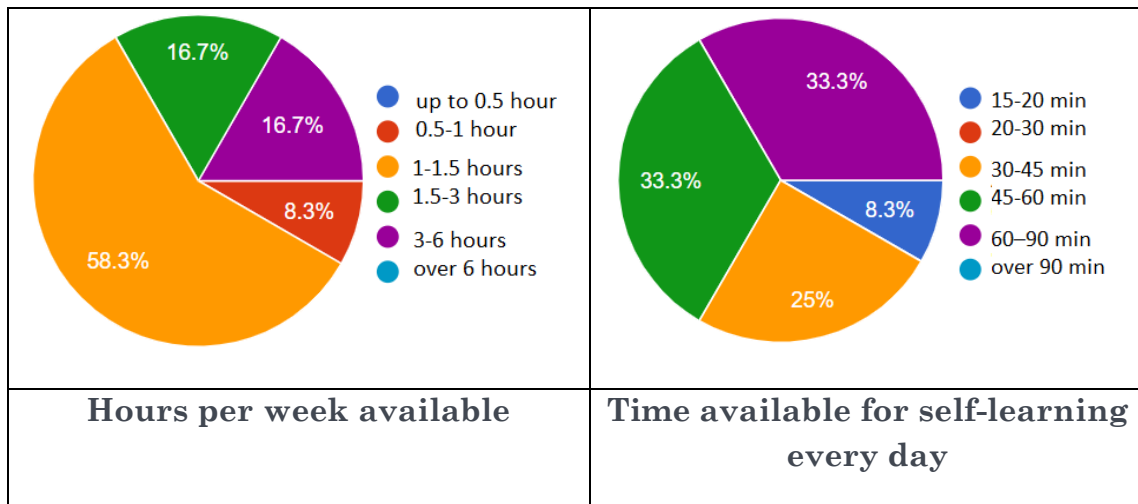
The interviewed would like to learn:

- E-learning
- Language learning
- IT and photographic knowledge - ability to use online courses and learn to produce multimedia content in various formats
- Fake news
- Drone support
- Computer skills
- Human physiology, the impact of food composition on physiology and thus health and life expectancy.
- Foreign language (English, Spanish, Turkish), useful, to the extent that simple communication is possible.
- Culture and language of other countries

To the question: What would motivate you to acquire new knowledge?, the answers are diverse about

- Diploma
- Better job
- Free courses
- Low price
- The need for communication
- satisfaction
- I am motivated, I am looking for the right offer

- Using foreign language skills while traveling, contacting friends via a computer and ongoing information transfer
- In the field of health - improving the functioning of both physical and mental body. In terms of languages - the ability to communicate with foreigners without friends without a translator.
- Travel plans



How many hours per week would you be available for learning activities (lectures, classes, webinars, etc.)?

7 Adult educators could spend about one hour or one hour and half that represents the 58.3% of the total. The second represent 16.7% one hour and half to three hours, and the third group [16.7%] can spend from 3 to 6 hours.

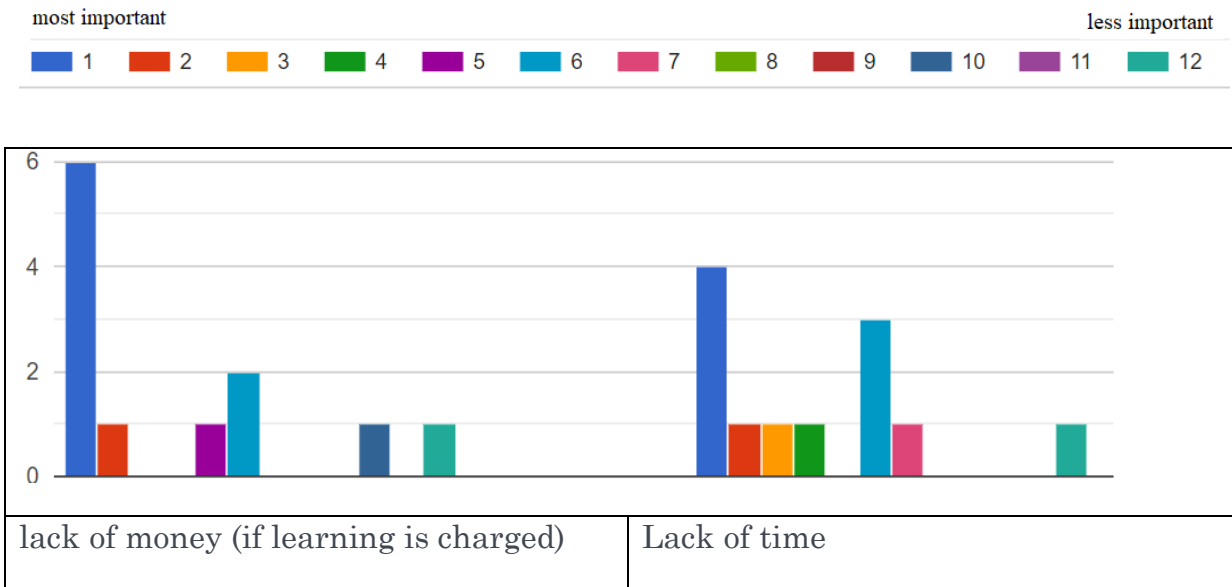
Concerning the time available for self-learning every day, the responses does not change much.

- 1 person [8.3%] can spend 15-20 minutes in self-learning every day
- 3 people would have 30–45 minutes per day to dedicate for self-learning.
- 4 adult educators would spend 45–60 minutes (33.3%)
- 4 participants would be able to spend between 60 to 90 minutes (33.3%)

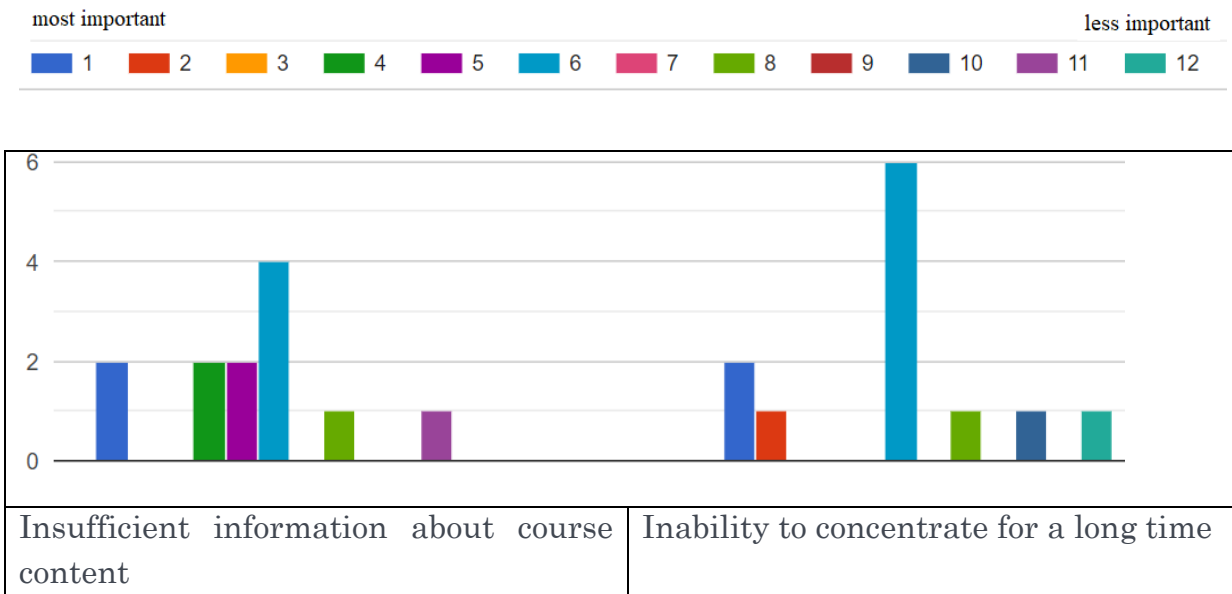
What are the barriers to acquire new knowledge?

The acquisition and constant up-dating of knowledge is an indispensable component of the professional development of Adult educators. Trainers and mentors of Adults willing to acquire new are exposed to various types of problems

and barriers affecting the pace and effectiveness of their development in the process of occupational improvement.



Six participants to the survey say that the most important barrier is lack of money and only four lack of time

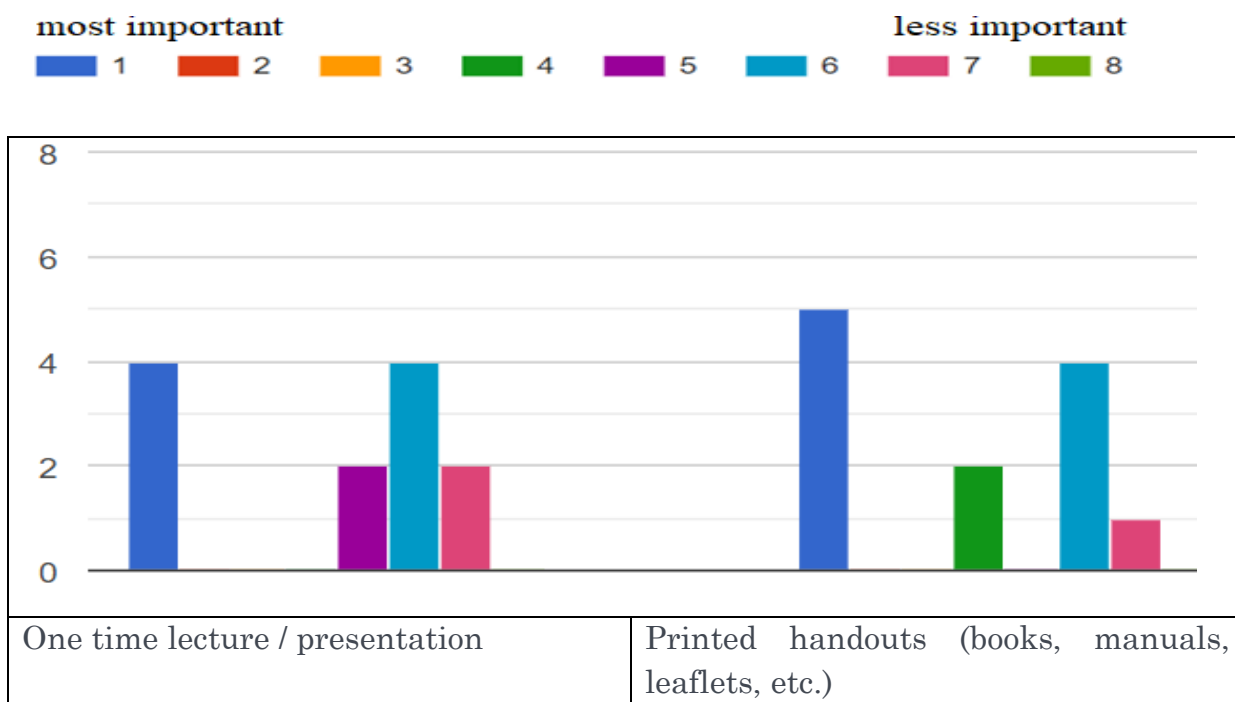


Insufficient information about the course content(4 participants) and Inability to concentrate for a long time(6 participants) has a mix feeling and give a mark of six in a scale of twelve points.

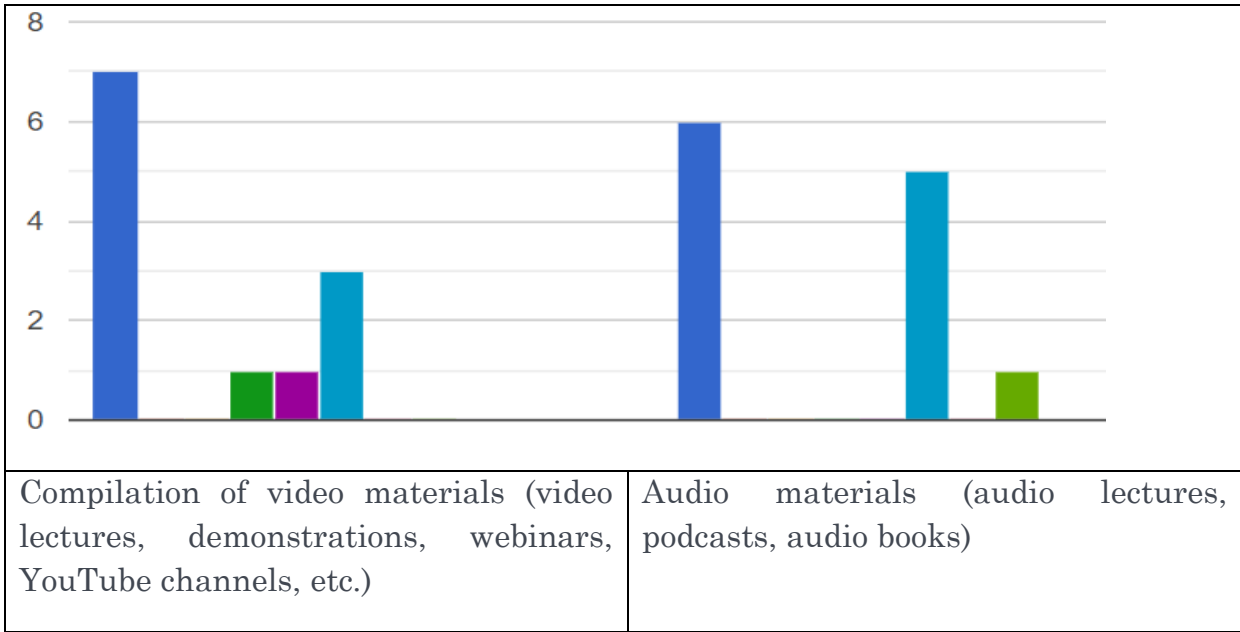
Preferred ways of learning

We are aware that each trainee has a different way and method to learn. Each of them for years develops certain habits that make it easier to learn in certain situations than in others. Adult people acquire information and knowledge in different ways. Each of them has different learning styles and strategies.

Most of the people develop one or more preferred learning styles from an early age. The preferred style is one that we will probably use when we participate in some formal and non-formal courses. If the teaching methods match our preferred learning style, the learning process is more effective⁷. Adult Self-Learning: Supporting Autonomy in a Technology-Mediated Environment [ASL] project try to maximize the level of the learning process in the course participants, and that is why we asked to our target group their preferred ways of learning:



⁷ Jak uczyć się skutecznie?, <https://rosnijwsile.pl/jak-uczyc-sie-skutecznie-fazy-nauki-style-uczenia-sie/>. Retrieved: 23.04.2020



Compilation of video materials (video lectures, demonstrations, webinars, YouTube channels, etc.)

Audio materials (audio lectures, podcasts, audio books)

CONCLUSION

The objective of the Intellectual Output is to build an operative model for teaching-learning low qualified adults in an online environment. Taking into account this objective the survey has given some important facts to be taken into account when building the operative model based in the needs of analysis of the target group:

- Adult educators in our target group are people 46+ (advent of the World Wide Web in the 1980s)
- 83,3% has average or less than average annual income
- 58,3% of respondents has a master degree
- 83.3% have access to both devices, smartphone and computer / laptop and uses it every day.
- The level of digital literacy of the survey participants is basic – independent (66,7%).
- Ten of twelve Adult educators had a educational event in the last 2 years and eight in the last 6 months.
- The training activities that would like to be involved are foreign languages and Information and Communication Technology.
- Will motivate certificates and low – free of charge courses
- Two lectures hours per week (45x2) are the most chosen within the survey participants (58.3%)
- Time for Self-learning that can be invest is about 45-90 minutes (66.6%)

The most important barriers can be:

- lack of money if learning is charged (50%)
- I have insufficient knowledge of English/foreign language

Concerning the preferred ways of learning the target group answered:

- Compilation of video materials (video lectures, demonstrations, webinars, YouTube channels, etc.)
- Audio materials (audio lectures, podcasts, audio books)

Adult Self-Learning: Supporting Autonomy in a Technology-Mediated Environment [ASL] project trainers and teachers will take into account all findings and the learning styles of Adult learners to whom they transfer knowledge and

properly adapt methods and tools to the group of trainees so that the learning process brings the most benefits to the recipients.

After this first research, Saricam Halk Egitimi Merkezi - Turkey , Adana Bilim ve Teknoloji Universitesi - Turkey, Fundacja Instytut Badan i Innowacji w Edukacji - Poland, Ecoistituto del Friuli Venezia Giulia - Italy, Three Thirds Society - Greece, Rezeknes Tehnologiju Akademija – Latvia, partners of the “Adult Self-Learning: Supporting Autonomy in a Technology-Mediated Environment [ASL] project” will prepare a common understanding and view about the multifarious aspects of adult education that will be strategic for the project development.

The results of this IO will be of interest of the project stakeholders (governmental authorities, social services institutions, social entrepreneurs, NGOs) as well as of international stakeholders (educational institution, international organizations engaged in adult learning).

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