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**A bridge between digital migrants and digital natives**

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**Project Result N. 4**

**A PRACTICAL GUIDELINE  
FOR OVERCOMING THE CHALLENGES IN ADULT LEARNING**



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## 1. Introduction

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According to the United Nations report, while the proportion of the elderly population in the world was 5% in 1950, this rate was determined as 9.5% in 2020. By 2050, it is estimated that the proportion of elderly population in the world will be 22%. Although the rate of elderly population in the world is 9.5%, this rate is 19% in Europe. According to the UN report, the proportion of elderly population in Europe is estimated to be 45% of the total population in 2050.

The increase in the elderly population confronts countries, societies and individuals with various problems. Especially the participation rate of the elderly population in life is one of the most important problems to be overcome. Participation in life depends on many factors such as participation in the labor force, participation in social and cultural activities, being active in society, and establishing social ties. Social exclusion, loneliness and social isolation are among the most important factors that prevent the elderly from participating in life. In addition to these, the lack of education of this population and their difficulties in following the changes in daily life negatively affect their participation in life. For this reason, it is very important to increase the life skills of adults over the age of 55 and to increase their adaptation to changing living conditions.

The European Union produces various policies in order to cope with the problems caused by the increasing proportion of elderly population and to ensure the participation of the elderly population in life. Increasing the participation rate of the elderly in the labor force, ensuring access to health services, ensuring their participation in social life, developing policies to ensure the care of the elderly, and protecting the rights of the elderly are among the important goals of these policies.

The concept of lifelong learning is very important for increasing the participation and self-efficacy of the aging population. This concept, which refers to the adult population outside the school age increasing their skills by education, has become more important with the increase in the elderly population.

The 'European Union Circular on Lifelong Learning' dated October 30, 2000, stipulates that lifelong learning cannot be limited to education only, and that a vision that covers all learning processes should be adopted, and lists six key messages that Europe should target for a comprehensive and coherent lifelong learning strategy. First, the focus is on ensuring the continuity of education in order to acquire and renew IT skills, foreign languages, technological culture, entrepreneurship, and social skills, which are considered to be the new basic skills required by the knowledge society. Secondly, it aims to increase investment in human resources. Third, it aims to improve teaching methods in line with needs and demands in order to increase effectiveness. Fourthly, it aims to document and value all forms of learning participation and learning outcomes, in particular non-formal and informal learning. Fifthly, to ensure easy access to guidance and counseling on learning opportunities within Europe and throughout their lives. Finally, it is proposed that lifelong learning opportunities should be made available as close as possible to learners and that these services should be supported by information and communication technologies as much as possible (European Commission, 2000). In the Commission's 'Concrete Goals for Education Systems,' report of January 31, 2021, one of the priority

goals is to contribute to the development of active citizenship and social cohesion by facilitating access to all education systems.

However, the participation rate in adult learning varies across countries. According to a study conducted by EUROSTAT in 2018, the rate of participation in adult learning in the 28 European Union members is 11%. Sweden 29.2%, Finland 28.5%, Denmark 23.5%, Romania 0.9%, Bulgaria 2.5%, and Croatia 2.9%. In terms of gender, the rate of female participation in adult education in the 28 EU countries is 12.1%, while the rate of male participation is 10.1%. The EU Commission aims to increase the rate of participation in adult learning above 15%. In line with this target, some EU countries have reached a rate well above this rate, while others have a rate well below this target. The average of 28 European countries is also below this target.

The European Union has set a number of objectives in the field of lifelong learning and has allocated a significant budget for this purpose. A budget of €141.8 billion has been allocated for the 2014-2020 period to promote the participation of older people in lifelong learning. The most important issue in lifelong learning is to improve the digital skills of adults. Another EU target is to improve the digital skills of at least 50% of the elderly population.

The aim of the Mind the Gap project is to identify the needs of digital migrants, create a framework for today's digital skills, develop new learning content and methods, design an e-learning platform with digital training modules and webinars that will help digital migrants to actively participate in digital environments. For this purpose, Mind the Gap Project has an important role in achieving the lifelong learning objectives of the European Union in developing the digital skills of adults.

Although adult learning is supported by the EU through various projects, the specific aspects of adult learning require different approaches to be used in these pieces of training. Again, although adult education has its own problems, it is necessary to develop new approaches and methods specific to these problems. Adult educators who provide education for adults should especially be more equipped in this field. In addition, adult educators need a strategy to overcome the difficulties they face during pieces of training.

Mind the Gap Project is implemented by 7 different partners in Spain, Austria, Greece, Ireland, France and Turkey. One of the ultimate aims of the project is to prepare a practical guide for adult educators to overcome the challenges they face in adult education. Before preparing the guide, a survey was conducted among adult educators in the partner countries to identify the most common challenges that adult educators face in adult education. Based on the results of the survey, a practical guide has been prepared for adult educators to overcome the most common challenges in adult education.

For more information on the Mind The Gap project, please visit the website address below:

<https://mindthegap-project.eu/>

## 2. What is Adult Education?

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### 2.1. Adult Education

Education is the effort to provide intended behaviours to any individual. Cultural acquisition is achieved through education and individuals are provided with various skills that will facilitate their lives. How an individual should be educated is often associated with the science of pedagogy. This is because the process of education and learning has often been practiced on children in the past. For this reason, we more often encounter the word pedagogy when referring to the learning process.

However, in the face of the speed of technological change and the changing conditions of daily life, the education given during childhood is being questioned. Alfred North Whitehead stated that education by transmission is only functional if the duration of the emergence of important cultural changes is longer than the lifespan of the individual. However, if the duration of cultural changes is shorter than the lifespan of individuals, then individuals should be provided up-to-date education. This is because the education received until the 20s is actually outdated by the 50s, or the education given in those years is insufficient for daily life conditions.

The World Economic Forum's Future Jobs 2020 Report predicts that by 2025, 85 million jobs that currently exist in the world will disappear due to developing technology. It is stated that a working environment where people will be intertwined with digital technologies, artificial intelligence and machines will become widespread. It is emphasized that with the change in these business lines, people need to acquire new skills for this new business world and changing living conditions. In this case, the education that adults over the age of 55 in the 21<sup>st</sup> century received during their childhood and the experience they gained while practicing their professions will become dysfunctional after a while. Therefore, when talking about education and training in the 21<sup>st</sup> century, it is necessary to recognize that education is not only the sum of the knowledge acquired during childhood but also a process that should continue throughout life. Therefore, lifelong learning is one of the most important concepts of the 21<sup>st</sup> century.

As mentioned above, since the process of education and training is perceived as a process specific to childhood, the concept of pedagogy and the concept of teaching are often used together. However, the adult mindset and perceptions of the educational process are quite different from those of children. Adult educators can clearly see this difference in the training they offer to adults. The expectations of adults from education and their participation in educational processes have led to the idea that adult education should be considered as a separate field. For this reason, experts have suggested using the concept of andragogy instead of pedagogy in adult education and have conducted studies in this field.

After the use of the concept of andragogy in the lifelong learning process, the differences between this concept and the concept of pedagogy were discussed. The main difference between andragogy and the assumptions on which traditional pedagogy is based is explained by experts. These

differences also include issues that need to be considered in adult education for adults. Accordingly, the basic assumptions of Androgogy are as follows:

***"As people mature, their personality evolves from being dependent on others to being self-governing."***

A human is an individual who is connected to his environment from birth. This dependence obliges them to obey the environment. The environment transforms the individual into an individual compatible with society through education. For this reason, childhood is a stage in which the individual is open to being guided. At this stage, the individual adapts to the efforts of the environment to shape them. However, in adulthood, the individual has a self-structure and social roles in life. The individual who was passive in childhood is more active in adulthood. Rather than their environment shaping them, the individual shapes their own environment. In this stage of adulthood, the individual resists the education process in which they will be passive again. Therefore, it is very difficult for adults to be active listeners in the education process like children. While children tend to follow the lesson plans prepared for them, adults do not want to be involved in a plan that is not under their control. Therefore, unlike children, adults are more willingly involved in the educational process when they are the designers and planners of the educational process. An educational environment in which the autonomy of the individual is ignored and individuality remains in the background is not attractive for adults.

***"In adults, the lived experience that increases over time provides an accumulation of experience and this accumulation is supportive in the learning process. "***

There is an important difference between adults and children in terms of experiences. Children's experiences are external experiences. Their self-definition and self-perception are formed by the roles given to them by the environment. Therefore, children's self-identity is formed by environmental factors. For adults, however, life contains subjective experiences. For children, external sources are influential in any experience, whereas, for adults, what that experience makes them feel and the processes it brings about in their inner world are important. When an adult introduces themselves, they talk about their feelings, ideas, inner experiences, and personal actions. Therefore, experiences in the process of living are very important for adults. The lives and experiences of an adult are actually the elements that introduce his/her self-identity. Therefore, it is an important priority for adults to refer to the experiences of an adult and to establish communication-based on those experiences. Taking into account the experiences of adults and benefiting from information about them is both a need and a motivation for adults. Because when adults feel that their experiences are valued, they also feel respected. When their experiences are not recognised, they may feel rejected.

Since adults have more life experiences than children, adults have more learning resources. At the same time, learning can become stronger when newly learned information is combined with life experiences. However, unlike children, adults may not think as flexibly and adapt to new situations as children because they have more life experiences and view life from a certain perspective. This is a challenge for adult educators. This challenge can be overcome by making connections with other life experiences of adults.

***"The developmental tasks of adults and children differ."***

Developmental tasks are tasks that arise in certain periods of an individual's life and, in case of success, make the individual happy and motivate them to complete other tasks, and in case of failure, cause unhappiness in the individual and make it difficult to complete other tasks.

In children, these tasks are usually physical development tasks and mental development tasks. For example, for a child, moving from crawling to walking is a developmental task. The realization of this task is related to the body becoming sufficient for walking. Successful completion of this task is a physical development. However, adults have different developmental tasks than children.

The developmental tasks of adults are mostly related to social roles. They are faced with tasks such as being successful at work, passing on their experiences, fulfilling their responsibilities towards children as parents, and being citizens.

A certain level of readiness is required to accomplish each developmental task. Therefore, in order to complete any developmental task, it is necessary to determine whether the individual is ready to complete that developmental task. Just as the development of leg muscles is expected to be completed before a child can walk, various processes need to be completed in adults in order to complete any developmental task. Therefore, in addition to the content of the training to be offered to adults and how it will be taught, the level of readiness of the adult to receive the education and the timing of the education are also important.

The motivations of adults applying for adult education may differ. Bringing people with different motivations together may cause disharmony in the education environment. However, a homogeneous group of people with the same motivation can make the education more effective. If a link can be established between adults' motivations for applying for education and their developmental tasks, attendance and interest in education will increase. While some individuals may apply for various adult educations that provide skills to facilitate their daily lives, some adults may apply for educations that provide skills to socialize and improve their social environment, and the expectations of these two groups from training will naturally be different. For example, some adults who want to develop digital skills may aim to benefit from citizenship services through digital skills and thus meet their own needs in an individualized way and may participate in the education with this motivation. Some adults may apply for an adult education to learn how to use social media and blog sites to share their life experiences with other people, to share their ideas, comments on the agenda with the society and to make their thoughts known to more people, and to gain digital skills that can be used in this field. Although both groups want to improve their digital skills, the underlying motivation behind this desire is quite different. For this reason, clarifying the reasons for participating in the education and the goals to be achieved through this education before any adult training is a facilitating factor in the education process.

The education offered to children is a preparation for the next level of education, and the content of instruction includes knowledge that will be used in later life. Therefore, the education offered to children is subject-centered. However, this practice may be dysfunctional education in adult education. Because adults want to adapt what they learn to live and may be indifferent to information that they cannot use in daily life. For this reason, instead of theoretical education in adult education, training with practical applications should be emphasized. The quality of adult education will be



positively affected if the content of this training is linked to the developmental tasks of adults and practical applications are offered in accordance with the developmental tasks of adults.

From the perspective of developmental tasks, the educations to be offered to adults should be problem-centered rather than subject-centered. Therefore, an adult educator should clarify the problem areas, needs, difficulties faced by the adult who is willing to receive education, and the skills that can overcome these difficulties, instead of focusing on the subject to be taught as a priority in any life adult education process. When starting any educational process, adult educators should prefer the question "What will they achieve through this course?" instead of "What is the subject of this course?".

The first studies on andragogy aimed to reveal the differences of adult education from pedagogy. After these explanations in the literature, the assumptions of andragogy were formed. These assumptions are summarized as follows:

- Before learning any subject, adults need information about why they should learn that subject. When adults encounter a learning environment, they want to know what kind of contribution the subject to be learned will add to their personal life and what kind of loss they will experience if they do not learn it.
- Adults tend to feel responsible for the changes in their lives. For this reason, they attach importance to decision-making processes in a matter related to their lives. Therefore, they want to control the processes in all experiences that shape their lives. For this reason, they do not want subjects to be imposed on them in any educational environment. They want their ideas to be taken into consideration in the process of teaching the subject to be learned.
- Since adults have more life experiences, they come to an educational activity with more and different qualities of life experience.
- Adults think it is important to know and learn in order to cope with any subject. Therefore, in fact, adults are ready to learn what they need.
- Adults' learning motivations are not subject-centered; they are experience-centered. Adults want to know what kind of change a subject to be learned will bring about in their lives.
- What motivates adults to learn is more internal than external factors. In other words, adults are motivated by internal factors such as achieving satisfaction in their work, increasing their level of self-esteem, and increasing their level of self-efficacy rather than motivation sources such as rising at work, being promoted, and increasing their income.

## 2.2. Adult Education in Andragogy Perspective

In the 21<sup>st</sup> century, the increasing need for adult education has led to the development of new approaches in the field of adult education. For this reason, first of all, the differences between adult education from the education offered to children have been determined. In line with these findings, basic information that adult educators should know about the education to be offered to adults is presented. In this direction, a series of recommendations for adult educators can be mentioned from the perspective of the basic assumptions of andragogy.

- In adult education, a problem-centered education should be preferred rather than a subject-centered education.



- In adult education, the past experiences of adults should be utilized, and new subjects to be taught should be linked to the past experiences of adults.
- In adult education, practical information should be presented rather than theoretical information.
- Clear and precise explanations should be made on where the training to be offered will be useful in daily life.
- A course flow should be prepared in consultation with adults, rather than a ready-made curriculum for lectures or topics.
- Contrary to popular belief, adults are eager to learn and their learning skills have not atrophied. They just have different interests and are interested in subjects that can contribute to their own lives.
- Adults' motivations for learning are not extrinsic rewards; they are intrinsic motivations that will contribute to the adult's personality and self-efficacy. Therefore, the motivational tools required for adults to learn any subject should contribute to their inner world and support their personal development.
- Adults have certain principles and world views. In cases where these principles are not taken into account, a lack of motivation and lack of interest in the subject to be learned occur in the learning process. In order to prevent this, the expectations, demands, and suggestions of adults should be taken into account before any adult education and the lessons should be structured accordingly.
- The contribution of the subject taught in adult education in daily life should not be explained only verbally, but should be practiced during the lesson. Lessons that are not practice-oriented are not interesting and functional for adults. For example, in an adult education course on the development of digital skills, introducing the e-mail system and explaining how to send e-mails is not sufficient for adult education. In addition, during the course, people should create an e-mail account and send e-mails anywhere.

### 2.3. The Structure of Adult Mind

Although the learning process is primarily an effort to bring about behavioral change in the individual, this process is closely related to cognitive skills. Therefore, before any teaching activity, it is necessary to recognize the cognitive functioning of the person to be trained.

Cognitive skills differ across life stages. There are differences between the mental functioning of a newborn baby and the mental structure of an individual in their 20s or 50s. Cognitive skills include information processing speed, attention, memory, language, visual-spatial abilities, and executive functioning skills. Various studies have been conducted to determine the difference between the mental structure of the adult mind and the mental functioning of other age groups.

In this guide for adult educators, we believe that having knowledge about the adult mind structure will contribute to adult educators. For this reason, various information about the structure of the adult mind has been compiled.

The concepts of crystallized intelligence and fluid intelligence are frequently mentioned to describe cognitive activities. Crystallized intelligence refers to the type of intelligence that has developed as a result of experiences, based on experiences, and shaped as a result of the learning process. Vocabulary learned knowledge, and experiences are examples of crystallized intelligence. For example, the

contribution of an experienced doctor to the cognitive functioning of processes related to their profession is explained by the concept of crystallized intelligence. According to experts, while crystallized intelligence remains constant in the first 6 years of life, it increases as life experiences increase. For this reason, adults or the elderly are more advantageous than young people in actions that require crystallized intelligence. Again, if we take the profession of doctor as an example, the success of an experienced adult doctor in diagnosing and intervening in complex diseases may be at a higher level than a young doctor. This is because the adult doctor's years of professional experience have contributed to the development of crystallized intelligence.

Fluid intelligence refers to the individual's ability to solve problems in the face of new problems. Fluid intelligence includes a person's innate ability to process and learn new information, solve problems, and pay attention to and manipulate their environment. Fluid intelligence is associated with executive function, processing speed memory, and psychomotor areas of cognition. This type of intelligence peaks in the 30s and begins to decline after a certain age.

Knowledge about these two different types of intelligence will increase the quality of educational services offered to adults who receive education in the lifelong learning process. Especially when the information that crystalline intelligence is high in individuals over the age of 55, but fluid intelligence performs lower than early ages is evaluated, it reveals that education to be offered to adults should be based on the knowledge and skills of adults. At the same time, it provides the information that while explaining any subject to adults whose fluid intelligence is slowing down, concepts and words that adults are unfamiliar with should be avoided as much as possible. If adults do not have any prior knowledge about the subject to be taught, the process of learning that subject requires more effort. For this reason, the subject should be enriched with words that adults are familiar with and examples from their life experiences.

Types of intelligence can be divided into the areas mentioned above and the functionality and performance of these areas may vary in adults. For this reason, some information about the sub-components of intelligence will be presented.

- **Process Speed**

Processing speed encompasses the ability to understand the meaning of any information after encountering it and to make connections with other information in the mind. This cognitive function, which exhibits high performance in the early years of life, tends to exhibit the lower performance from the 40s onwards. This cognitive domain, which includes the ability to learn a new word and understand a new subject, slows down in late adulthood. For this reason, when the age group is taken into consideration in the training to be offered to adults, too many new concepts and words in the subject matter may negatively affect the effectiveness of the training. At the same time, the learning objectives at the level of knowledge should be less in the education offered to adults. Because the processing speed slows down, it may be difficult for this information to become permanent in the mind and adults may develop a negative perspective toward education. On the other hand, the subject matter and the course content should be spread over time, progressed at a pace suitable for adults, and repeated continuously. These practices will prevent the negative effects of the slowing down of processing speed with age.

- **Attention**

Attention refers to the ability to concentrate and focus on specific stimuli. Attentional skills are defined in two different domains: selective attention and divided attention. Selective attention refers to the ability to ignore irrelevant information and focus on specific information in the environment. For example, while driving a car, ignoring stimuli such as the radio, objects on the road, and vehicles on the side, and focusing on driving is a situation related to selective attention. Selective attention performs better in adults than in young people. Because adults perceive environmental stimuli in a more limited way, they are less affected by external stimuli and perform better in focusing attention on the desired location.

Divided attention refers to the ability to focus on more than one task. For example, being able to talk on the phone while preparing a meal refers to divided attention. Older adults hold information in their minds instantaneously. This can make it difficult to perform some tasks. Since skills that require divided attention require more active use of short-term memory, older adults tend to underperform in the use of this skill. In other words, older adults are disadvantaged in divided attention skills.

In line with this information about attention skills, the fact that older adults have highly selective attention helps them to have a better level of learning skills when they focus on any subject. If there are no other internal distractions, adults can pay better attention to the subject matter when motivated. This is an important advantage for adult trainers. On the other hand, since older adults have poor divided attention skills, they may not be able to adapt to lectures that are disorganized, intertwined, and do not follow a certain order. If there are any physical problems in the lesson environment that may cause discomfort and older adults are focused on them, it may be difficult for them to focus on the lesson at the same time. Therefore, the selective attention of older adults should be directed to the lesson as much as possible.

- **Memory**

Memory is all the information stored in the mind. One of the biggest problems for older adults is changes in memory. Memory is also divided into declarative and non-declarative memory. Declarative memory is the ability to recall information in memory when it is needed. Vocabulary knowledge, knowledge of place, time, and sequence of events, and information about recognizing people are declarative memory skills.

Non-declarative (implicit) memory is the involuntary recall of information in memory. For example, the ability to ride a bicycle, tie shoes, to remember a song when the melody of a song is heard are skills belonging to implicit memory. Implicit memory skills are strengthened by frequent repetition of a subject to be learned. More precisely, frequently repeated learning targets are sent to implicit memory after a while. However, information that is not repeated or practiced remains in declarative memory and their recall requires a separate effort.

Declarative memory skills show lower performance with advancing age. Negative effects that occur in memory with advancing age are as follows:

- Decline in the ability to recall information without any clues
- Decline in the ability to recall the source of the information learned. The inability to remember what the source of a piece of information is.

- A decline in remembering intended future actions. For example, forgetting to take medication after dinner is an example in this field.

However, age may have no effect on certain functions of memory, and older people can use these memory skills just as well as younger people. These skills are:

- The ability to retrieve information when given a clue
- Recalling past events in the correct order and time
- Remembering information about how to do things. For example, the ability to cook any food, the ability to drive a car, the ability to use any tool.

Adult trainers should organize the training environment by taking into account the disadvantages of memory that arise with age. For example, if any information learned is not repeated, explained through practice or applied to adults, it is likely to be forgotten. Therefore, emphasis should be placed on practice in adult education. Since the ability to send learned information to declarative memory decreases with age, a short repetition of the previous lesson should be made in each lesson in order to protect against the disadvantages that this situation may cause. Information that is not repeated and practiced can be forgotten in a short time in older adults. At the same time, matching the new information to be taught with the areas where the memory of older adults is still strong ensures the permanence of learning.

- **Language**

The language skill vocabulary defines the ability to express oneself by sequencing words in a meaningful way. Vocabulary increases with advancing age. Life experiences contribute to the development of language skills. Language skill is also a function of implicit memory. Since the function of implicit memory does not decrease with age, it is easy to remember the words learned in the past years. However, the age-related decline can be seen in naming a newly encountered visual or remembering a newly heard concept. This may prevent older adults from recalling a new word or the name of an object when they learn it. For this reason, if a new concept, word, or vocabulary is taught in training offered to older adults, it is necessary to match this concept with the experiences of adults or to give more examples about the functions of the concept. For example, if we want to teach concepts and words used in social media to a group of adults receiving training on developing digital skills, it is necessary to show these concepts and words with applications. For example, if the social media word “sharing” is being taught, an activity of sharing someone's post from a sample social media account can be done. This ensures a stronger learning of the word "sharing".

- **Visual-Spatial Abilities**

This cognitive domain refers to the ability to understand any area in two or three dimensions. It is the ability to know the location of an object in a certain area, and to locate the parts of a fragmented whole. This skill does not decline with age. In other words, the ability to remember the location and position of an object whose location and position have been learned does not decrease with age. Therefore, older adults do not have much difficulty in recognizing and remembering any area they have learned. However, older adults may have difficulties in accepting a change in this area. For example, when the order of the desks and the location of the tools and equipment used in an educational environment are changed, this can be a challenge for older adults. For this reason, keeping

the place of practice in a certain order and not changing the settlement that adults are used to helps to prevent problems that may be experienced during the teaching process.

- **Executive functioning**

This area of cognitive skills is the ability to plan on any subject, solve a problem situation, respond to given questions, and overcome uncertainties. This area of cognitive skills declines with age. Therefore, there may be limitations in skills such as information processing, interpretation, and transfer to practice in older adults with age. This may cause older adults to feel inadequate and helpless when learning any subject and may cause them to leave the education process. The decline in this function may even develop a prejudice against education and prevent older adults from applying for education. In order to overcome this, the educator needs to be very patient in educating adults and should not be in a hurry to demonstrate the skill to be taught. Although older adults may understand a skill, it may be difficult for them to put it into practice. For this reason, the educator needs to be very accepting, move with the learning pace of the adult and convey that this is natural.

For example, in an education offered for adults in the field of digital skills development, when the topic of sending e-mails is covered, adults may have understood how to do this. However, they may have difficulty practicing the skill of sending a message to any e-mail account. In this case, the practice should be continued, the adult should be encouraged, and in case of mistakes, the adult should be treated as if they are trying that skill for the first time.

### 3. Major Challenges in Adult Education

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Although the assumptions of andragogy in adult education are known and the mental structures of adults are understood, there may be subjective problems faced by adult educators in adult education. These problems can be overcome from the perspective of the assumptions of andragogy and scientific research on the cognitive skills of adults. In order to identify the challenges faced by adult educators in adult education, a questionnaire was administered to adult educators working in the partner countries of the Mind the Gap Project. 31 adult educators from 5 different countries participated in this survey and the most common challenges faced by adult educators were identified. This section aims to provide information about these challenges and how to cope with them.

#### 3.1. Reinforcement of learning in adult education

As a result of the questionnaire, it was determined that the most difficult area for adult educators is the lack of sufficient resources to reinforce the information learned in adult education.

The ability of adults to transfer the information they take from short-term memory to long-term memory is gradually weakening. At the same time, adults are practice-oriented learners. For this reason, it is very important to reinforce the subject to be taught.

The resources to be used by adult educators regarding this difficulty vary depending on the content of the subject to be taught. Although adults can benefit from external resources in the education process, the adult educator who teaches the course should also make arrangements related to the education plan. These are:

- **When planning the education, ask adults to tell you how they can learn a topic better.** Each individual's learning and reinforcement process differs from one other. Therefore, before the education, ask adults about the most appropriate reinforcement tools that will provide permanent learning for them. This method not only makes adults feel that they are included in the process and their opinions are valued but also helps the adult educator to plan the training.
- **Prepare assignments in the education plan that can reinforce the learning after the education.** Some lesson plans may be subject-oriented and include more theoretical information in the training process. The main reason for this may be due to the structure of the subject matter or it may be a misapplication of the training method. For this reason, the adult educator should check how much space is given in the lesson plan to practice in order to learn the subject. If there is a lesson plan that emphasizes lecturing, this plan should be updated.
- **Practise is a must-have in adult education.** This approach, which is even more important than lecturing, should not be ignored in adult education. The short duration of the course and the

problems that may be experienced in class attendance may reveal the problem of not having enough time for practice. For this reason, the adult educator should prepare activities that adults can practice after the education. In-class activities may be insufficient. For this reason, activities that adults can continue after the training should be prepared in advance. These activities can be in the form of homework or a performance task that the adult can use in everyday life. Obviously, performances that adults can perform in daily life are more functional than fixed assignments. For example, in digital skills development education for adults, a performance task might be to send an e-mail anywhere. However, this task should have a place in the adult's daily life. The e-mail to be sent can be a text to be sent to the seller about his/her satisfaction or complaint about a product. This not only helps to practice the educational outcome such as the ability to send e-mails but also makes it clear that this knowledge is functional for adults in their daily lives. For this reason, it would be useful to focus the reinforcement assignments on tasks that adults encounter in daily life and want to solve or realize.

- **For each lesson, identify resources such as e-books, videos, websites, brochures, etc. that will help reinforce that lesson topic.** The speed at which adults process information is slow. For this reason, it may not be possible to quickly understand the topic covered during the lecture. However, when the same information is repeated by another person or written source, adults can learn the information presented.
- **Take advantage of online training. With the developing digital world, the use of the digital world as an educational environment has become widespread.** Especially through video content, the subjects to be explained are presented more effectively. Thanks to these contents, the learning process can be facilitated and adults can both practice the subjects they want to learn and access the training at any time. Some internet applications that can be used in this field are as follows:
  - ✓ **Udemy:** Udemy is one of the world leaders in online education and offers a wide range of subjects. It offers courses in programming, design, business, marketing, music, foreign languages, and many more. Most of the courses on Udemy have unlimited access. At the same time, notes can be taken on course videos and questions can be asked to the instructor. Course content can be searched by subject on the site. Adult educators can use this site to find lessons that can help reinforce their own lessons and recommend these contents to adults. [Udemy](#)
  - ✓ **LinkedIn Learning:** LinkedIn Learning offers educational content on business, technology, creative talent, data science, and many other topics. Courses are taught by business leaders, industry experts, and lecturers, offering a wide range of skill-building opportunities. This platform, which generally contains more academic information, is very useful for those who want in-depth learning. Different pieces of education on the desired subject can be followed and shared with adults attending the courses. [LinkedIn Learning](#)
  - ✓ **Open Culture:** Open Culture is a platform that provides free access to online educational resources. You can access various different resources on science, philosophy, art, technology, history, and many other topics. You can access a wide range of content such as e-books, videos, articles, audiobooks, etc. [Open Culture](#)



- ✓ **Skillshare:** Skillshare offers courses in creative skills, design, technology, and business. Users can interact with each other through interactive classes organized by teachers. It is a very useful application, especially for those who want to improve themselves in a particular hobby. [Skillshare](#)
- ✓ **FutureLearn:** FutureLearn is a platform that offers courses from leading universities and institutions. It offers courses in science, social sciences, business, arts, health, and numerous other subjects. It is a platform where courses can be selected according to their duration and more academic information, but supportive of people who want to learn in detail about a subject. [FutureLearn](#)
- ✓ **TED-Ed:** TED-Ed is a platform designed to support students and educators worldwide. Topics include science, history, art, math, and more. Often featuring talks by experts or experienced people in a field, it is a great way to learn about different topics and benefit from people's experiences. [TED-Ed](#)
- ✓ **Coursera:** Coursera is a platform that provides access to courses offered by the world's leading universities. It offers courses in science, engineering, social sciences, business, and many more. [Coursera](#)

### 3.2. Different teaching techniques to be used in adult education

One of the most important issues in any educational process is the teaching techniques to be used. The characteristics of the group to be educated help to determine the teaching techniques to be used. Adult educators need to know the assumptions of andragogy very well before any education process. Although the teaching process seems to be related to the word pedagogy, as explained above, the two have quite different assumptions. Based on the assumptions of andragogy, the following teaching techniques can be used in adult education.

- Even if adults are involved in a course knowing the subject matter of the course and the course has a predetermined lesson plan, seek their views and advice on the lesson plan at the beginning of the course. Adults are more likely to adhere to a structured program rather than one that is tailored to their priorities. Inviting adults to cooperate with the lesson plan helps to motivate them and to show loyalty to the course. Adults express more clearly what they need and what they want. For this reason, it may be more functional to organize the education to be offered to adults in line with the outcomes determined according to the needs of adults rather than pre-designed outcomes.
- Adults have more life experiences and they can associate these experiences with learning processes. For this reason, it is necessary to know the past experiences of adults in the education process and to determine which of them can be used. These experiences can also provide specialization on the subject being learned. These life experiences can also determine in which subjects adults need support. At the same time, it may take time for adults to learn new information as their information processing speed slows down. In order to get rid of this disadvantageous situation, it is more functional to design training content or explain training topics based on previous experiences.
- Adults are more prone to problem-centered learning. If any information is to be learned for an adult, what kind of contribution this information will make to the adult's life is a very important question for adults. For this reason, adults focus on the aspects of the subject or course that solve daily life problems instead of learning a subject in detail and specializing in that subject. In adult education activities that do not contribute to daily life problems but produce artistic

content that will increase the well-being of adults, the exhibition of the products designed by adults as a result of the training can provide a socialization gain for adults. As such, strengthening the taught content with activities that will increase the quality of life of the individual in daily life ensures that the teaching process is effective.

- Prepare a training plan with more practices and activities. Adults want to acquire a skill in a short time and see the results of their training immediately. For this reason, the frequent practice should be done during the training process. These practices also remove the obstacles in front of the permanent learning of adults. Evaluate the ideas of adults on how to do the practices. A training method consisting only of lectures and theoretical explanations is not suitable for adult education.
- Set as few learning objectives as possible. Although the adult mind structure is open to learning skills, it takes time for new information to settle in the adult mind. Therefore, learning outcomes should be clear, precise, and few. This helps adults to focus on the subject and facilitates the processing of information.
- Use education materials. It is not functional to continue adult education with the method of only verbally explaining any subject. The preparation of slides, videos, audio recordings, and materials that appeal to the senses of hearing, sight, and touch should be used frequently. With this method, adults feel included in the process and learning becomes more permanent through rich stimuli.
- Prefer a dialogue-style narration instead of a monologue-style narration. For example, before giving information about the achievements of the course, prepare an environment that will allow them to generate ideas with a question such as "What skills do you think this course will give you?". The important thing is not to answer these right questions, but to make adults think more about the subject.
- When you are going to make any changes regarding education content or plan, or even if you have already designed education content, you can decide by presenting options to the adults instead of having them apply it directly. Adults find a cooperative communication language more interesting than an authoritarian one. For example, if there are various applications you will do related to the lesson, you can ask the adults which application you will start first.
- Include group discussion in the education process. Group discussion is a good opportunity for adults to share their experiences, present their own ideas and explore their motivations for the education. Holding group discussions before or after the education provides a feedback opportunity for the educator and helps to clearly identify the expectations of the adults and the gains at the end of the training.
- Prefer a problem-oriented or solution-oriented teaching method. Aim for any lesson to be taught to adults to contribute to solving a problem. For example, when an adult education course on developing digital skills is opened, if there is a desire of the participants in the course, have each participant create a blog page and share their life experiences on this blog page. They can share their opinions about their profession, their life experiences, the artistic skills they have, and their travels. Setting such a goal at the beginning of the education enables adults to showcase their learning outcomes and also provides a concrete output of the training.

### 3.3. Dealing with absenteeism in adult education

One of the most frequently encountered problems in adult education is absenteeism. The main reasons for absenteeism may be that adults have different responsibilities in daily life, they have health problems, they do not perceive the education process as sufficient, the course subjects do not appeal to them, the skills to be gained are at a level above the performance that adults can perform. The studies that can be done about this difficulty are as follows:

- Try to identify the potential for absenteeism before the education. Discuss the daily routines and responsibilities of the adults and how much time they can allocate to this education before starting the lectures during the education process. Identify each individual's barriers to attending the course. Get information from adults about working hours, rest hours, visiting hours, etc. Try to organize the lesson plan and time according to this information.
- Ensure that the lesson flow and lesson plan are organized in such a way that adults can be active in the lesson. Adults do not enjoy being passive in the educational environment. For this reason, applications and activities with activities that allow adults to express themselves should be preferred.
- Investigate the reason for the first absence. The beginning of any negative situation is very important. In the first case where adults are absent from education, contact the adult and try to understand the reason for the absence. Because the reason for this absence may be the way the lesson is taught, the behavior of others in the group, or the fact that the lesson does not meet the expectations of the adult. Adults may sometimes not be able to express these situations and may prefer to disconnect from the education process. However, if the necessary trust environment is provided in the relationship with the adult and the adult is given the opportunity to express themselves, these reasons can be revealed and prevented. At the same time, calling an adult for absenteeism gives the message "We want to see you in the team, you are important to us" and this helps to establish a positive bond between the adult and the educator.
- At every stage of the lesson, show that this lesson will contribute to their daily life skills or improve their quality of life. For this purpose, provide opportunities to demonstrate these skills through activities and assignments. As adults are solution-orientated thinkers, they want the time spent on the educational process to be returned to them as a gain and they do not like the feeling that their time is wasted.
- Adult education is also an environment where adults are socialized. Sometimes the experiences to be lived during the education may be more valuable for adults than the content of the education. For this reason, do not worry that conversations or discussions during the lessons will be drawn to topics outside the lesson. On the contrary, use these processes to strengthen the cohesion of the group. For example, in an education environment prepared for a painting course, the topic may move away from painting skills to the communication problems that adults have with their children. This situation can be accepted as a short break and an environment can be created where adults are given the opportunity to share themselves. In this case, for adults, that environment can be perceived as a place where they can express themselves and add value to their lives rather than a lesson environment. This motivation of adults coming to the educational environment can work as a factor in preventing absenteeism.

### 3.4. Use of digital tools in adult education

Thanks to the development of digital technologies, teaching methods have been enriched. Particularly, educational materials that can be presented in the visual field have become quite widespread. Thanks to Web 2.0, anyone with an internet connection can make their educational materials available to others and a large sharing network has emerged.

The slowing information processing skills of adults can be improved by diversifying educational materials and content that appeals to more senses. For this reason, it is useful for adult educators to have knowledge about digital tools that can be used in education.

The educational content in a digital environment can be divided into two main groups. There are educational websites with lectures, where experts give serial lectures on a subject, as well as platforms that allow educators to make designs in order to better explain the subject to be presented in the lesson and where these designs can be shared with other educators. Since information about educational platforms has been provided in the previous sections, this section will only provide information about the platforms where instructional content is designed. These platforms are as follows:

- **Kahoot:** Kahoot allows teachers to prepare interactive quizzes for their students on various subjects. This website can help teachers identify topics that students do not understand and help students learn the topics. [Kahoot](#)
- **Quizlet:** Quizlet provides flashcards, quizzes, and other learning tools for teachers to help their students learn. This website allows you to adjust your teaching method accordingly, taking into account the learning style and speed of your students. [Quizlet](#)
- **Padlet:** Padlet allows teachers to share information such as course materials, assignments, and notes with their students. This website can help teachers manage classroom communication and students' homework. [Parlet](#).
- **Nearpod:** Nearpod allows teachers to create interactive presentations for their students. This website can use many elements such as video, audio, images, and text to help students learn. [Nearpod](#).
- **Google Classroom:** Google Classroom allows teachers to share information such as assignments, course materials, and notes with their students. This website can help students manage their assignments and facilitate classroom communication. [Google Classroom](#)
- **Edpuzzle:** Edpuzzle allows teachers to edit videos and make them interactive. This website can help teachers to increase students' interest in lessons. [Edpuzzle](#)
- **Prezi:** Prezi allows teachers to prepare presentations. This website can help teachers create compelling presentations to attract students' attention. [Prezi](#).

## 4. Auxiliary Resources

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### 4.1. Websites

**American Association for Adult and Continuing Education (AAACE):** AAACE is a leading organization in the field of adult education and offers a variety of resources on andragogy.

<http://www.aaace.org/>

**Adult Education Research Conference (AERC):** AERC is a conference where research in the field of adult education is presented and discussed. On the conference website, you can access research and presentations on andragogy.

<https://newprairiepress.org/aerc/>

**European Association for the Education of Adults (EAEA):** EAEA is an organization active in the field of adult education in Europe and offers resources on andragogy.

<https://eaea.org/>

**International Journal of Lifelong Education:** This journal is one of the leading journals publishing research in the field of lifelong learning and includes important articles on andragogy.

<https://www.tandfonline.com/toc/cjle20/current>

### 4.2. Videos

- Adult Learning Theory | Knowles' 6 Assumptions of Adult Learners  
[https://www.youtube.com/watch?v=yQuQF\\_rZXZw](https://www.youtube.com/watch?v=yQuQF_rZXZw)
- Using Adult Learning Principles to Create Effective Training  
<https://www.youtube.com/watch?v=Uk-CV53O9X4>
- "Knowles' Adult Learning Theory or Andragogy - Simplest Explanation Ever  
<https://www.youtube.com/watch?v=vzKxZtca00o>
- "Teaching Adults: Adult Learning Theory  
<https://www.youtube.com/watch?v=32V7L3-04pU>

### 4.3. Books

**"The Adult Learner: The Definitive Classic in Adult Education and Human Resource Development" - Malcolm S. Knowles:** This book helps to understand adult learning theory and the characteristics of adult learners.

**"Teaching Adults: A Practical Guide for New Teachers" by Ralph G. Brockett:** This book provides new adult educators with a range of strategies for working with adult learners.

**"How to Teach Adults: Plan Your Class, Teach Your Students, Change the World" (How to Teach Adults: Plan Your Class, Teach Your Students, Change the World" by Dan Spalding:** This book offers solutions to problems teachers may face when working with adult learners.

**"The Courage to Teach: Exploring the Inner Landscape of a Teacher's Life" by Parker J. Palmer:** This book focuses on the inner and emotional aspects of the teaching profession.

**"Facilitating Learning in Adult Education: A Handbook for Leaders and Teachers" A Handbook for Leaders and Teachers" by Stephen D. Brookfield:** This book addresses how learning can be facilitated when working with adult learners.

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