



## **Ways of Adult Education in the Context of Personalized Pedagogy**

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### **Abstract**

*Online education has become a necessary part of adult education because it makes learning possible anywhere and at any time. Adults who have dropped out of school may have negative feelings towards the traditional classroom. For them, lessons were boring and they struggled with the traditional curriculum. The use of technology in the classroom can reflect real-life realities, thus providing an interesting learning experience; adults now actually learn what they will use in everyday life, feel motivated and eager to learn. There are highlighted the influences of online learning upon adult education. In this context, teachers can provide a personalized approach.*

**Key words:** Adult education; models; online learning; personalization

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## **1. Introduction**

The individual motivation for learning and the variety of learning opportunities are the fundamental keys to the successful implementation of lifelong learning. The level of demand for education must increase along with the supply, especially for those who had, until then, received less education and training. This means, very simply, that education and training systems must adapt to the needs and demands of the individual, and not the other way around (Guțu & Poștan, 2009, p. 16). If the adult is different from the child and the adolescent, it means that his education will mean something else. Adults need new forms of education. It is required a new conception of their education.

The need to recover a social position, a decision of socio-professional ascension can have as an effect a resocialization approach, a biographical reconstruction of existence. What are the characteristics of the education of the elderly? Viviane de Landsheere believes that problems belonging to this age group generally prefer to continue working, learning, developing, and using their cognitive abilities. (Landsheere, V., and G. De., 1979, p. 260). People of this age are also encouraged to take on social and educational responsibilities, provide study support to those in need, to become assistants in various educational actions, experts if they have a high qualification.

Today, adult education interferes with lifelong learning. It unites school education and adult education together, it brings the school together with life. The personalist trend emphasizes the rational dimension in knowing the personality of the learner. The trainer must restore the adult's taste for learning, often repressed in school by punitive methods. Carl Rogers recommends confronting the adult with life situations, involving him in moral debates. He believes that a change of personality cannot occur if the interactive trainer-format process does not take place in a climate of trust, in an ambiance of group experience. Lifelong learning protects us from premature aging from a cerebral and psycho-social point of view, it maintains our spiritual youth. Because adults like to feel at ease in training, creating a benevolent atmosphere, mutual knowledge in groups, defusing tense situations, and counteracting fatigue are also indispensable roles of the trainer. Once we lose the interest or comfort of the mature person for an activity, we may not be able to bring him back to school. Since we want the learning process to be as intelligible and relevant as possible, we cannot rely only on the power of the word, no matter how well it is chosen. Creating written, drawn or printed teaching projects facilitates the perception and understanding of the message. Evaluation is far from a formal issue, meant to account only for successes and to bring praise to the teachers, but a succession of actions that indicate the degree of relevance, the degree of satisfaction of all participants in learning, a measure of the quality of content, and the degree of interaction in teaching-learning. Usually, even content evaluation is not so much about awarding grades, but especially about identifying areas for improvement. Related to the evaluation and always comparable to this is the collection of adverse reactions, common in use with the English name of feedback.

The existence of an educational offer is a necessary condition for attracting and involving adults in the educational process, but it is not enough. To avoid socio-professional exclusion and meet the demands of the labor market, people need to get involved in continuing education. It is also desired to find those factors that increase the motivation of adults to participate in continuing education, study, and research. An important factor is the personalization of pedagogy and its adaptation to various categories of people and particular problems. Adult education can be formal (organized by institutions) and non-formal (activities organized outside the school but in an institutional setting). Demand in the labor market is constantly changing. Thus, there can be observed an increase in the need for improvement. Adult education has several specific characteristics: a conscious attitude towards the learning process; the need for independence; the need to set clear goals; practical orientation of the training - the desire to apply the acquired competencies, the realization of the abilities; social and professional experience - level of

socialization and professionalization; polyvalent influence on the learning process of professional, social, family and economic factors.

A special didactic section - andragogy - assumes that the adult student is responsible for defining his/her area of study, choosing methods, scheduling deadlines, and evaluating results. He acts as the main initiator and client of the training while the teacher or mentor plays the role of process coordinator - the designer, shaping new forms, methods, and training opportunities. In this sense, active methods of teaching adults who have proven their effectiveness are becoming increasingly popular: presentations, seminars, business, and role-playing games, business training, cases, small group discussions, modeling and project execution, learning by doing, etc. When organizing adult education, experts recommend that the following characteristics be taken into account:

- a conscious attitude towards their learning process;
- the need for independence;
- the need for meaningful learning (goal setting and motivation);
- practical orientation of training - the desire to apply acquired skills;
- social and professional experience - the level of socialization and professionalization;
- multipurpose influence on the learning process of professional, social, household, and temporary factors.

An adult should be considered a responsible participant in the learning process and its initiator. However, the mentor teacher still carries a decisive share of responsibility for defining learning objectives. The student must be aware of his/her responsibility. Otherwise, his training may not be effective and he will not achieve his goals. It should also be borne in mind that, although with age, many bodily functions gradually weaken (sight and hearing loss, the memory deteriorates, there are difficulties in perceiving new information), the learning abilities themselves in adults aged 20 to 60 do not change significantly. Moreover, at people engaged in mental work, learning abilities persist for much longer. Usually, the decrease in age-related learning ability is associated with a person's general health and energy, a decrease in the objective and subjective need for new knowledge, and a decrease in the possibilities for its application. Economists make the cost-benefit analysis of the educational process: who covers the costs of education? The benefits obtained are only for a certain person or for the whole society? Sociologists look at the situation from the point of view of equal opportunities. The unprecedented growth of economic development that followed World War II allowed both individuals and society to maximize investment in education. Individuals copy a series of behaviors, attitudes, beliefs, ways of acting learned in the socio-familial origin of sociology, introducing two new concepts to explain this-habitus and capital (Bourdieu & Passeron, 1975, p.25). Economic capital is what allows people to pursue not only any form or level of education but also for any duration. Lack of financial resources requires people to leave the education and training system - sometimes even during compulsory school and the chances of returning to education are even lower.

## **2. The concept of personalization**

Personalization defines a process that seeks to respect the dignity and uniqueness of each student, improves equity in education, optimizes personal potential, takes into account the needs of all students, but especially those of the vulnerable and less able, and enriches and stimulates the involvement of students and teachers. In principle, personalization gives the student increasing control over what he learns, how they learn, when and where they learn and the people they study with. Personalization is different from individualization, it actively involves the adult learner in their education, by carrying out a collaborative approach between him and the teacher, aiming at the objectives, the methods that will be used, the forms of evaluation. Adults' students may also have different levels of skills and competencies, which they have acquired in non-formal contexts, including in the professional activity carried out, skills, and abilities that can be

used. In making the personalization, the teacher must offer the student a self-analysis, which involves his reflection on his motivations, a recollection of previous learning experiences to determine what the effective approaches were. The proposed model, that of personalization, starts from the idea that learning is a continuous process and only partially conscious, therefore, to increase its efficiency, the students themselves must be actively involved, to become collaborators in this evolution that learning represents.

The concept of customization refers to the granting of at least partial independence to the learner, independence that can aim primarily at setting objectives, proposing or choosing methods or strategies, but also capitalizing on previous learning, regardless of its context. This is because, especially in the case of adults, the "baggage" with which they come to the class in which they become adults again is very different, depending on the environment from which they come, family, the profession they practice, all of which lead to the priority development of skills or competences. The areas targeted by the personalization of learning take into account not only the cognitive side but also the definition of goals, which must be pursued both operationally and emotionally. The self-direction that the adult can achieve in the learning process (corresponding to the term Personal Mastery) is an advantage that must be capitalized.

There are two different approaches: the first involves an analysis made by the student himself, who proposes - to the extent offered by a less flexible program and a fixed course program - an adaptation of the calendar, planning of the themes, a hierarchy or even negotiation of some of the objectives, aspects related to material resources, methods, types of evaluations; while individualization involves a learning process that is molded to different temperaments, learning styles. It can be seen that, while individualization is time-consuming, personalization is a way to streamline by saving one of the most valuable teaching resources - time.

### **3. Theoretical models in adult education**

Over time, attempts have been made to develop planning models that are as effective as possible to achieve the desired goal. Adult education remains a continuing challenge.

#### **Knowles's model (1970)**

Knowles, Holton and Swanson (2012) created his model based on his andragogical philosophy: adults rely on self-direction; use their experience as a resource for learning; they want an immediate application of what they learn. This involves self-diagnosis of learning needs, participation/ involvement in planning and learning, and self-assessment experiences. Needs analysis is done by different methods at the individual, organizational, and community levels. The objectives are divided into educational and operational categories. The author recommends quantitative methods for measuring behavioral changes and assessment by adults to measure the process of self-development.

#### **Kidd's model (1973)**

Kidd (Boone, Safrit & Jones, 2002) has a mathematical planning approach. His theory is differentiated by focusing on the learner being very precise and analytical in curriculum development. Among the characteristics of adult learning (Kidd, 1981) the following will have to be recorded:

- a) man learns all his life, even if he goes through periods of evolution or decline in this action;
- b) the effect of learning consists in the changes of the role of the individual, which imply the acquisition of professional and interpersonal skills;
- c) through socialization, the individual acquires maturity, and from this perspective, he approaches the events of life;
- d) experience matters enormously in the adult's determination to engage in learning;
- e) the desire to activate, to engage, to "wake up" to life leads many adults through the status of self-taught - people who learn all their lives;

f) for the learning adult, time and old age have special meanings.

Adults often have a certain resistance to learning, perceived as a "painful process of change on a personal and intellectual level, as well as on the manual operations involved in learning" (Kidd, 1981). They perceive reality in their way and save their time, interpersonal contacts, they appreciate social situations satisfactorily. That is why it is recommended to place them in an encouraging context of a learning group; working collaboratively, at their own pace, perhaps in small stages and without external constraint in exam preparation, they gain confidence in their strengths and an appetite for the learning effort. To succeed and live qualitatively, the modern man must be active in relation to learning; Kidd in his book, "How Adults Learn", Kidd wrote the following: "The aim is to ensure the climate, atmosphere, freedom, and self-discipline in which learning is facilitated. In convenient, suitable conditions, men and women can demonstrate their ability to learn." (Kidd, 1981).

#### **Boyle's Model (1981)**

Boyle (Boone, Safrit, & Jones, 2002, p. 31) approaches programming as a comprehensive synthesis of theory, analysis, and practice. He links this programming to continuing education and lifelong learning. Boyle presents 15 relevant concepts: the first nine (establishing philosophical bases for programming; analyzing the needs, concerns, problems of people and communities; involving potential clients, determining levels of intellectual and social development; selecting sources of investigation and analysis in determining program objectives; recognizing organizational and individual constraints; establishing the criterion for determining the priorities of the program; choosing the degree of rigidity / flexibility of the planned programs; obtaining the support of the power of formal and informal situations) refers to the planning stage, the next four to design and implementation (selection and organization of learning experiences; identification of instructional design with appropriate methods and techniques; effective use of priorities; obtaining the necessary resources to support the program) and the last two to evaluation (determination results, efficiency and impact, communication of the value of the program to decision-makers). Boyle suggests that setting priorities is a multigroup process that uses staff, organizations, clients, the community, politics, and other resources to set priorities in the education program and determine goals. His theory is close to Knowles'.

#### **The model of Cervero and Wilson (1997)**

The authors define planning as a social activity, in which people negotiate among themselves the goals, content, audience, and format. An educational program is never built by a single planner outside of an institutional or social context. Programs are built by people, with multiple interests, working in specific institutional contexts, which profoundly influence the content and form of the program. Cervero and Wilson (2006) believe that power and interests define the social context in which program planners must act. To link planned freedom of action and structured constraints, the main form of action proposed is negotiation. To act responsibly and function effectively, adult educators must: be informed about the institution and social contexts; be politically skilled; be skilled in negotiation, and able to democratically create and support the planning process.

There has been a lot of discussion about program planning over the last 15 years. Much of this literature and research has been based on the planning model of the Cervero and Wilson (1994) programs as bargaining power and interest in the light of the context, bringing relational power to the forefront as an integral part of the program planning process. While Cervero and Wilson, as well as those who rely on their work, participate in the context, they do not specifically address issues relevant to program planning contexts.

#### **Sork's Model (2000)**

Sork (2000, p. 185) proposes a question-based approach to programming: asking questions and answering can lead to better decisions and programs. The model is entitled "Basics for Planning a Program." Each element represents a group of passive questions, decisions, and actions involved in program planning. The elements of the model are the following: analysis of the

context and the learner's community; explaining and focusing on planning; clarification of intentions and preparation of the instructional plan; preparation of the administrative plan; developing a summative evaluation plan. Sork proposed a systematic approach to the educational encounter between adults' needs while encouraging accountability through the use of objective results orientation and systematic evaluation.

**Caffarella's Model (2002)**

Caffarella (2002) proposes an interactive model for planning a program, as a reconfiguration of the best features of several existing models. Its model differs from others in two distinct respects. First, it reconfigures the current and classical descriptions of the program planning process, resulting in an 11-component model, based on practical knowledge and content from a variety of contexts. In designing an adult education course/program, it is necessary to take a few steps: description of an overview of the content, elaboration of an idea plan, the arrangement of the ideas in the order of their importance, formulation of the objectives, sketching of an application plan, specifying some elements related to the necessary resources, sketching of the course/program format, finalization of the budget and marketing plan. Once the concept of the course is outlined, its feasibility must be evaluated through the needs analysis, then we proceed to a detailed design, followed by the implementation, with all the specific issues, so that in the end it is evaluated multidimensionally (Caffarella, 2002, p23).

**The model of Stolovitch, Keeps, and Rosenberg (2017)**

In the book *Formation by Transformation. Beyond lectures* (2017), the above-mentioned authors present a universal model for organizing any type of lesson, to create a training process focused on the student and performance, a model that can be easily adapted for the design of training programs. The elements of the model are: (a) introduction and motivation; (b) the performance objective; (c) teaching activities; (d) evaluation; (e) feedback.

Most planning models in this integrative approach seem to have some common features. First of all, they involve taking steps, as is the traditional approach. Second, to build an effective program, they recognize that the work of planners must receive increased attention in complex social contexts. Third, they suggest that planners change those steps or elements that they do not consider compatible with their context or style. In the Table 1 we present a summary of the models analyzed above.

Table 1. Models of adult education.

<b>Model</b>	<b>Definition</b>	<b>Development of the plan</b>	<b>Evaluation</b>
Knowles (1970)	Adults rely on self-direction and want to be able to immediately apply what they learn in practice	Using a self-diagnosis of needs, objectives are set. They are educational and operational. Needs analysis is done differently at the individual, organizational, community level	The evaluation is performed by quantitative methods for measuring changes. It also uses self-assessment and measurement of the self-development process
Kidd (1973)	It focuses on the learner. A mathematical, precise, and analytical approach is used	Needs are identified by investigating common interests and exploring one's needs. The learner is involved	Standard evaluation methods
Boyle (1981)	Makes a comprehensive synthesis between theory, analysis, and practice	Uses 15 concepts. The first 9 refer to the planning stage, the next 4 to the design and implementation stage	The last 2 concepts refer to the evaluation, respectively the determination of the result and the

			efficiency of the impact
Cervero and Wilson (1994)	Negotiation is used for successful planning. It is a social activity influenced by goals, content, format, and audience	Planning is democratic depending on all the factors involved: students, teachers, planners, leaders of institutions, the social context in which the educational activity takes place	The efficiency of the negotiation is assessed, as well as what was requested in the negotiation process was obtained.
Sork (2000)	Planning is done based on questions to analyze the context and determine the necessary actions	Based on the answers obtained, the instructional plan is prepared, the intentions are clarified and the administrative plan is made.	The evaluation is summative
Caffarella (2002)	Follow the big picture, make a plan of ideas. The elaboration process is performed at a high level using technical and practical details	The design is done in detail taking into account the smallest details. The feasibility analysis is performed by analyzing the needs and resources necessary for the implementation	The evaluation is multidimensional: of the program as a whole, of the students' satisfaction, the impact of the program, and the results obtained.
Stolovitch, Keeps and Rosenberg (2017)	Transformation training, student-centered and performance-focused process	To carry out the planning, the student's motivation is taken into account. The didactic activity is carried out taking into account the performance objective	Performance goals are assessed and not the person. Feedback for guidance is taken into account throughout the educational process.

The socio-economic context in which we operate is constantly changing. Even if we manage to keep the same job throughout our lives, we still have to take training courses. We can also be put in the situation of a professional reconversion. The adult is reluctant to change. Courses for adults have a greater need for personalization. The two main barriers to effective adult learning are involvement and motivation. These barriers are manifested not only in the learning process but also in the application stage.

#### **4. Characteristics of adult learners**

Knowles made five assumptions about the characteristics of adult learners that distinguish them from children: self-esteem, the experience of adult learners, desire to learn, learning orientation, motivation to learn.

##### *Self-esteem*

Adults are more independent than children and can independently "direct" their behavior toward self-control and responsibility. In the e-Learning environment, the course author can guide the student and provide him with all the necessary resources. At the same time, adults should be able to independently discover most of the new information and apply it according to their educational needs.

##### *The experience of adult learners*

Adults have a certain amount of experience and memory that they can rely on in the learning process. Before designing an e-course, it is imperative to have a clear understanding of adults' experiences and current needs. Adult education tends to be more focused than children's education. Therefore, for a course to be recognized as useful, it is very important to use the specific experience to show how the teaching material is relevant to the student.

##### *Desire to learn*

Adults will be more willing to study materials that are focused on solving specific problems and directly related to professional and social development. If adults see the public benefit of the course, their involvement will be greater. Goal-oriented learning refers not only to learning new challenges but also to social interaction, group learning, peer evaluation, etc.

#### *Learning orientation*

Adults view learning differently: they focus more on an urgent need for knowledge than on a longer application. The educational needs of adults focus more on specific tasks than on the subject as a whole. The child studies algebra; an adult can study the sphere of a certain type of equation to solve a financial problem. To ensure the involvement of course participants, we need to make sure that they understand from the outset how the training module will be useful for their particular situation. Specific real-life examples work best for adults or the organization they work for.

#### *Motivation to learn*

While most children have an extrinsic motivation to learn (teachers, parents, etc.), most adults tend to be results-oriented and motivated. If a student knows why he is taking an online course and when he will be able to apply the knowledge gained in practice, it is easy to master his intrinsic motivation. Today, we cannot use effective learning solutions without taking into account e-learning. Many of the learning applications have a real scientific basis. In e-learning, a user can experience different principles of learning, such as behaviorist, cognitivist, or constructivist. Technology has made possible the emergence of a variety of tools that mediate learning.

## **5. The influence of online learning upon adult education**

For adults, we consider E-Learning the most effective way to personalize pedagogy. If in terms of children's education, e-learning is flawed, in terms of adult education it manages to meet most needs. From the point of view of personalization pedagogy, e-learning is the appropriate tool. Through it, we can reach anywhere in the world and especially at any time. Adults are caught in the whirlwind of life and are always against time. E-learning is a way of learning that is increasingly able to define the needs of learners. It can be adapted according to the needs of the learner but also according to the possibilities of the teacher. It can be registered, translated, distributed, configured according to the existing requirements on the labor market.

Technology influences adult learning by the fact that:

- it becomes, practically, unlimited; schools, universities, companies are interested in developing their own ability to provide learning opportunities anywhere and anytime;
- learning through play is more interactive; recent studies show that play is an intensely enjoyed learning experience by young people, which sometimes even replaces the idea of interaction;
- the "one to one" relationship is widely accepted in educational and professional settings around the world, on the idea of supporting individualization, even personalization;
- learning redesign is another natural consequence of the use of technology, which leads to the diversification of the way of learning: collaborative, integrated, through simulation, project-based, problem-solving, etc. In schools, for example, teachers have reconsidered the traditional 50-minute lesson or their role, as a new virtual instructor.

### **5.1. Benefits of online education**

Online study programs are created taking into account learning principles that meet the modern needs of the employee. This type of teaching has many benefits:

*The flipped classroom principle for streamlining the time from the course session, the adults maximize the discussion time at the meeting, studying the theory individually and practicing it later, at the meeting with the trainer;*



*The principle of asynchronous learning, characteristic of the needs of the modern employee* - learning anytime and anywhere, adults can participate even if they are on a delegation, sick leave, or vacation;

*The concept of social learning is maximized* - learners interact with each other in relaxed environments such as discussion forums, learning from each other, not just from the trainer;

*The concept of gamification to motivate and reward adults*, adults are rewarded for their work and are presented with progress;

*Rich content, immediately accessible, and adapted to the device* - study materials are diverse, easy to access, and view.

For an online training to be successful, certain conditions must be met: the internet connection must be of very good quality for both the trainer and the adults, the trainer must know very well the platform on which he runs the training and always needs back-up in case he encounters technical problems. Teaching online requires flexibility in learning and brings clear results. Some adults logged in on vacation, from the hotel reception, or the balcony of the hotel room. Sales representatives also logged in from the car - they made a stop to participate. One student attended classes on sick leave. The important thing is that, wherever you are, you can find 1 hour and 40 minutes to not be left behind, when you are interested in your goal (Eucom Oana). Therefore, online teaching, the most flexible training program, opens many windows to the student's learning style, his/her preferences, of course, his weaknesses, the trainer can thus create a personalized experience for each individual.

## **5.2. Implications of online education on adult learning**

In these circumstances, a series of logistical, pedagogical, technical, and content impediments in the field of many school subjects inevitably appeared. All this can be seen either as barriers or as challenges that teachers, education beneficiaries, and education decision-makers try to face in the rapid pace at which they appear, manifesting, in variable proportions, availability, interest, pedagogical mastery, inventiveness. These situations were based on both subjective causes and objective causes such as lack of equipment, low level of digital skills, type of employment, job replacement, etc.

The complexity and rigorous scientific basis of such a perspective depend on the level at which we can adequately respond to existing challenges, to improve the quality of education in the short, medium, and long term. The online activity has, beyond the obvious advantages, as highlighted by the present study, limits in the teacher-student relationship. However, it also has limitations, which have a negative impact on effective learning as an important side of face-to-face teaching which cannot be fully achieved virtually. It is very difficult to have a personalized interaction with a specific student in the context in which the contact is not direct, the teacher is followed online by a whole class and each student asks for attention. Online educational platforms, streaming platforms, in general, facilitate real-time communication between teachers and students. However, communication, in this case, is very often perceived as somewhat artificial, on the one hand, due to the impossibility of obtaining real communicative feedback (which makes communication authentic) and on the other hand due to the awkward context of placement in the virtual space. The fact that you can be recorded, the fact that you can be heard by anyone (not just your students), not having real control of the target audience, determines teachers to build a correct, consistent, fluid discourse. Nonverbal communication and mediated use of paralanguage complete the difficult paradigm of online communication where communication is done through instant chat, and some clues that good nonverbal communication could produce to support verbal communication are now lost through interruptions or blockages specific to these sessions in conditions of limited bandwidth capacity or busy traffic.

The trainer ceases to be a simple speaker, who exposes knowledge, positioning himself especially as an accompanist of the educated on the path of knowledge. The educated person

becomes responsible, like his teammates, for the act in which he is trained, building or reorienting his route according to his own will and rhythm.

Regarding educators, we identified problems in terms of their preparation to serve as guides, trainers, facilitators, etc., in the digital environment. Such a role requires a specific set of skills, including digital skills, knowledge of the educational offer available online (with the ability to evaluate the quality of courses), but also social skills and various "soft skills" (to support people from different residential backgrounds, age groups, and levels of education). Courses or studies that would allow the development of such skills are non-existent or rare.

New communication technologies are emerging as a means to filter information, to see, to feel, to do. However sophisticated they may be, they resume functions, on a different scale, of older communication situations. The learning process is supported by new cognitive amplification tools. They are a kind of extension of human psycho-mental or somatic functions: sensory polymorphism, maximum interactivity, extensive memory power, combined exploitation of knowledge sources, infinite possibilities of manipulation and symbolic connection, reverse feedback, permissiveness to the real and the imagination. Socialization tends to acquire a new dimension, an extensive one, integrating atypical experiences, those of a virtual nature, without direct and concrete contacts. New connection and communication systems can accelerate communication skills, imaginative or inventive, but they can also slow down or stop them if they are not used effectively and, especially if they are used unambiguously. No matter how successful the new technology is, it needs to be complemented with traditional, classic strategies for performing human skills. It is good to know how to communicate with or through the computer, but also with those around us. Live, direct, colloquial, personal contact with those around us or with our person can never be fully replaced by any technique, no matter how sophisticated.

We must not forget that all this environment is one created, artificial, added, superimposed over the natural one that tends to eclipse, to dilute, to disappear. Natural, direct, face-to-face communication becomes "a rare flower", loses its importance, fades. Classical interactions between people (through interpellations, negotiations, confessions, etc.) seem to be in decline. The colloquiality and warmth of direct contact are replaced by the accuracy and rigidity of typical formulas, of impersonal, abstract "protocols". We have come to have "discussions" on the Internet, to participate in "forums", to order goods, to pay, to consult with doctors, or to "confess" spiritually, being separated from each other, at great distances, assisted, of course, by the computer. No new technique replaces an old one, as they co-exist or interfere with each other (with the advent of the Internet, the book has not disappeared). The class of adults no longer remains a protected space, isolated and closed to the world. New actors tend to enter it: scientists but also idiots, professionals but also intruders, good people but also charlatans, rational people but also persons aimlessly carried away by the waves (Cucos, 2006, p.43).

The field of further education is developing at an incredibly fast pace. Most modern professions (especially those related to the Internet) are not covered by higher education programs. However, the rate of change in these professions is staggering. For the company and its employees to advance, it is important to invest in staff training to help employees grow, acquire new skills. This is where online learning comes into play. The growing popularity of online learning has allowed busy people to acquire distance learning, which is much more convenient. While distance learning is a reliable way to acquire new knowledge or update old knowledge, it is effective only when the student is motivated enough to complete the course. It is known that with age it becomes harder to concentrate. Therefore, it is quite difficult to create an interesting online course for adults. An online course takes place in parallel with the events in the life of each participant; so that everyone will feel more attached to the group if they can share pieces of it with the others.

Online media offers a wide range of ways to present information: Web pages with online resources, tables, images, graphics, simulations, audio, video files - many elements to support those who prefer passive types of learning. Engaging everyone in writing and commenting on

papers, discussions, debates in asynchronous or real-time conferences (text and/or video) will increase the quality and retention in the learning process.

Cognitive modeling has had and has a multitude of practical applications especially in terms of software interface design. Cognitive modeling has had and still has a multitude of practical applications, especially in terms of software interface design. In the case of education, the design and implementation of all programs used for this purpose must take into account the psychological and sensory characteristics of man. Aspects such as shape, color, size, intuitiveness of presentations must always be in the center of attention of the educator who designs the learning media. Virtual environments, especially 3D ones, involve a multitude of perceptual, cognitive, and social aspects. That is why designing these environments in accordance with human possibilities and improving individual performance is a real challenge.

The online learning environment includes all four processes in Kolb's taxonomy: doing, experiencing, reflecting, thinking. Kolb chooses the learning cycle as a basic principle in Experiential Learning Theory (Kolb, 1984, p. 35). The cycle consists of 4 stages: concrete experience, reflective observation, formation of abstract concepts, testing the application of the concept in a new situation. Adapting to different learning styles is also possible through the flexibility offered by the online environment. For example, the learning cycle can begin with the student's involvement in concrete experiences; reflection on experience; then follows the explanation, the logical conclusion; finally, experiencing similar problems. Flexibility also means that any student can devote the most time to their preferred learning style, also the fact that it can enter the learning cycle in any of the four processes. An engaging learning process with activities that include reading, simulation, search, synthesis, interaction, collaboration, makes, in most cases, an online course superior to a traditional one.

### **5.3. Interactions in an online course**

Interaction has an important educational role, being the central element of an online course. In the USA, the basic article that reveals this aspect is considered the three types of interaction, by Michael G. Moore (1989). It classifies interactions in a virtual learning environment into: participant-material, participant – facilitator, participant -participant. The three types of interactions show the importance, the interdependence, emphasizing that education must become participant-centered - learner-centered. Interactions are also found in traditional and online education. The most important interaction is that between the participant and the course material. This requires the participant to have maximum concentration and the highest percentage of time compared to the others.

In general, in traditional education, which sometimes still means only the transmission of knowledge, not involvement of the student in their construction, *Learner - Instructor Interaction* is more of a *Group of Learners - Instructor* interaction; in online education, the interaction between the facilitator and each participant becomes personalized, individualized, the facilitator having a direct dialogue with each one, throughout the course for clarifications, analogies, additional resources. Through conferences and group projects, the interaction between the participants, together with the facilitator, leads to the construction of the learning community. In traditional education, this type of interaction, except for group projects, takes more of a spontaneous form. The material can have different formats, adapted to the student's learning style. The student's interaction with the material is mediated by the facilitator and is realized in a learning community that the adults build, form together with the facilitator. If in a traditional course, the course material is static, being represented by the course notes or the course support book, in an online course, the material has two components, both dynamic:

- course modules, prepared by the facilitator, which refer to other resources on the internet that complete the notions presented - will be explored by each, depending on interest and prior knowledge;

- clarifications, arguments, new perspectives, resources, resulting from the interaction between students and with the facilitator, in conferences.

#### **5.4. Technological resources for adult learning**

There is a multitude of eLearning platforms, each offering different methods to create attractive courses. For example, using course gamification methods (introducing the elements of the game into learning), you can motivate adult learners, you can show them a new approach to acquiring skills. This unusual experience helps adults assimilate information more easily.

In teaching, a classification of educational software can be achieved based on the specific pedagogical function it can fulfill:

- practice software - interventions as a supplement to the class lesson, allowing the highlighting of the parts of individual practice, specific procedures, techniques or skills; they allow each student to work in his personal space and have permanent feedback by obtaining an immediate response;

- interactive software needed to learn new technologies - conducts a dialogue between adults and the program. The interaction can be controlled by the computer (tutorial) or by the student (investigations). The most commonly used tutorial aims to help the student step by step to accumulate new knowledge and skills.

- research software - the student is required to use a certain path to learn. It does not have a pre-established path but an environment from which the student must extract the information to solve the proposed tasks, taking into account the rules.

- simulation software. It allows the use of the behaviorist model but also of the traditional models of education.

- software for testing knowledge;

- educational games. It causes adults to solve problems. Use the simulation of a real phenomenon using various ways to achieve the goal

Designing educational software involves several steps that differ depending on the working group and the specialists involved. The first step is to carry out educational design and translate some educational strategies. In the second stage, the interface is made, with all the functioning requirements of the educational project. The diversity of "educational" approaches, as well as the specific approaches through which the designer wants to lead the student to achieve the goal, allow only general recommendations. The general recommendations cover both the elements in the field of pedagogy and the curricular, communication, evaluation, and feedback fields (Isofache, 2019).

Teaching area: designing educational software only makes sense if there is motivation; studying the knowledge of the target group; computer use cannot be an end in itself for the student; the interaction gives to the student the opportunity to react accordingly with the studied discipline and to attend the courses; the combination of two or several media sources (text, video, audio) provides a better understanding of the subject matter.

Curricular area: the content must match and take into account adults' expectations; the information transmitted by the discipline in question using specific terminology must be complete and detailed; the information must be logically structured and correspond to the design structure of the didactic approach.

Communication format: the language used must correspond to the level of preparation for students but also the content transmitted; use of technical terms only if they are relevant to the content of the discipline; use of the standard format because it is easy to understand and use by everyone.

Presentation interface: awareness of the importance of the interface; the screen must support the educational process not to be a distractor. The methods for emphasizing certain information must be uniform; the colors used for text, graphics, animation, and video must be

used accordingly; there must be a "help" button to return to a previous page; the way the software interacts has a major impact on the student and should send a positive and encouraging message.

The evaluation must take into account the following aspects: it is important to differentiate the "formative" assessment from the summative assessment that marks the level of performance accumulated by the student; control items are built gradually; the evaluation is performed throughout the informational approach; feedback. The program should offer the possibility to make changes depending on the reaction and suggestions of students. If we talk about fully interactive models in which the student can never be in the same room with the teacher, then this category of educational platforms is recognized as the most problematic. Courses without a teacher require a very high level of motivation, self-regulation, and organization - the required level is inherent in at most 3-5% of those who started training. It remains in high demand in the corporate sector because it saves significant time for adult learners and allows you to pump skills in parallel with work processes.

Free access to courses, which many online platforms have opened is an opportunity for the general user to try at least distance learning in its various forms. But it may take some time for everyone to get used to the online format and start learning fully. The optimal mix of online and offline options is blended learning. It is already growing in some areas of education where direct teacher and student work, socialization, and live communication are important. This makes it possible to study, communicating personally with an expert in a group or individually, carries out practical work at courses and seminars, and, at the same time, study online without losing the quality and dynamics of the educational process. Education is no longer limited to the school-university scenario. The training will have a more fractional form, but it will last a lifetime. Various online educational platforms will also be a good help for the concept of lifelong learning: they will push people to think about the need for lifelong learning.

## **6. Conclusions**

The trend towards digitalization of business, which has been going on for several years but is more relevant than ever during a pandemic, is reflected in business education. Managers especially want to learn how to run a digital business: developing a business strategy, building teamwork, management and administration, sales, and marketing, with a focus on digitalization. Moreover, the interest is observed among the representatives of companies from all market segments, even in conservative ones, such as medicine and construction. Business education is ready to take into account the needs of the business, to adapt to them, and provide relevant knowledge today. In turn, the growing interest of users in online education and the subsequent flow of investment in the field will become an impetus for the development of new learning tools. And based on the practical experience gained, educational companies will begin to implement tools that until now were not possible in an offline environment.

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