

# Моделі навчання літніх людей інформаційним технологіям

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У роботі представлено детермінанти, пов'язані з навчанням літніх людей у сфері інформаційних технологій (ІТ), які розглядалися синтетичним способом. Важливість дослідження цього питання визначається комплексом причин: інтенсифікацією явища старіння суспільства, перенесення ідеї освіти протягом життя у реально діючі установи та розвиток інформаційного суспільства у широкому розумінні цього поняття.

Професіоналізація сфери освіти літніх людей, зокрема у сфері ІТ, вимагає розроблення нових методичних рішень, які б дозволили літнім особам засвоїти нові вміння відповідно до їхнього віку і очікувань, а також психофізичних можливостей з одночасним урахуванням їхніх біографічних детермінантів.

Створення моделі освіти стосується впливу усіх найголовніших чинників і пов'язане з ідеєю стандартизації численних андрагогічних, геронтологічних і дидактичних теорій. У статті, з огляду на її обмежені рамки, лише загально окреслено стандартизованої методики, але натомість розглянуто багатий вибір загальноприйнятих освітніх моделей.

Потреба розуміння і створення досконалої специфікації освіти літніх людей виникає не лише через зміну сприйняття старості, але й також внаслідок виникнення загальної потреби освіти літніх осіб.

Наприклад, у Польщі протягом минулого десятиліття виникло кілька десятків університетів, і майже усі вони передбачають у навчальному плані курси інформатики для літніх людей. Ці установи користуються великою популярністю, а число їхніх студентів серед літніх осіб, котрі бажають отримати нові вміння, пов'язані з їхніми зацікавленнями, з кожним академічним роком збільшується.

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# Models of education of older people in the field of information technology

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*The purpose of below text is to present basic factors of each models of education, which seems to be useful during classes with seniors in appropriate institutions.*

**Keywords** – old people, models of learned, information technology

## I. Polish senior in information society

Hardness of adaptation of seniors to new, informative directly and indirectly area, is to understand, among others things, in percentage using of various types of microelectronic devices among the whole population. Old media like a radio, newspapers, a television are obvious way of getting information, whereas the personal computer (PC) with Internet connection, multifunctional mobile phone, or other mobile medias are used very rarely, mostly by people who are aware of this facilities, which are offered by media.

Civilization's development are determined by new technologies demands from people living in our times in more and more extent to possess competences in using the objects of everyday use, including personal computers connected to global network, al well [1].

Lack of skills of using electronic media is noticeable mostly in people beyond retirement age, even though proportion of users of new technologies in this group systematically rising up, especially among people in the 55 to 65 age bracket.

However, in a group of senior above 65 years old this amount is still unsatisfying. Alas, if it will not be make any attempts to create places of popularly, whole life education for older people in immediate time, the problem of digital expel might be solve only by natural generation's exchange, so for several dozen years a factor of new media's users will rise up spontaneously.

New media are not only an easy source of information for seniors, but it enable contact with relatives, vary social life, create the attitudes, develop interests and satisfy their needs. In informative society electronic media create social relations, generate resources, assure entertainment, and - when they are properly promote – rise up the quality of life [1]. In this moment it is worth to point out that in Poland only 20,6% people in age brackets are users of Internet, whereas above 65 years old the percentage is diminishing to 5,8% [2].

## II. About education's models

Dissimilarity of education process on different life stages may be considered in various ranges: goals, needs, motivation of learning, subjectivity and objectivity learning of the adult, opportunities to acquire new

competences with taking into consideration development changes (getting older the senses, changing of function of cognitive process including memory), social, cultural, civilized determinants (having time more or less inducing to education, promoting acquire the knowledge as a value and means to leading successful life), content, methods, forms, means, education's institutions, role of adults' teacher and fulfilling functions by education. Individual stages of life are characterize by themselves specific in process of learning context. Within life above mentioned determinants are changing, and the educational situation of adult, as well. So it is necessary to vary didactic way on every stage of life [3].

It is impossible to pass over the specific of functioning an older person in angle of appearing changes to characterize the learning model, which determine psychosocial functioning. As Elżbieta Dubas pointed out that late maturity (60/65 to 80 years old) brings many new and difficult life role at the same time, i.e. role of grandfather, pensioner, ill person, etc. in swap for other fulfilled earlier roles. At the same time an older person is seeing new form activities for himself, which are connected with uncompromising or gradually abandon to fulfilling professional roles. Excess of time possible to adapt allows seniors to taking up new life challenges in area: family, social-citizen, hobby, cultural, educational, gregariously, health, substitute professional [3].

In this moment it is worth to point out that model of education of seniors are connected with a few crucial matters, which create its entirety, among other things we can to set apart such as:

- *Specific of learning persons* – their features, life experience, attitude do subject, psychophysical conditions, motivation, material resources.
- *Style of teaching* – which are a results of specific of methodical-personality of a teacher.
- *Style of learning* – preferable way of acquire knowledge and skills.
- *Characteristics of institution*, for there are difference between classes in institutions for exact group, and courses, where groups are varied because of age.
- *Objective didactics* – appropriate instruments of education, methods, forms, means, content, exercises, handbooks, audiovisual facilities, IT tolls (platform for distance education) with simultaneous consideration rules of education and preferable styles of learning adults.

Discussing theoretical assumption of educational models in herein text it was focused on two popular elements, it means styles of teaching and learning, which are presented on below examples.

Being a teacher of adults, according to Mieczyslaw Malewski, you should ask questions allow to get three considerable answers, pointed on work with a group:

- What is the knowledge and what character it has?
- Who is an adult student and what knowledge should be given?
- What is the role of teacher of adults?

After answering on Malewski's questions we vary three different models of didactic work with adults: technologic, humanistic and critic. However, he adds that

in real space there are various types of those models, which create so called area eclecticism. Differences among crucial areas in every area was presented in below Table [4]. A skill of suitability every model with noticing their possibilities and limiting allow to make a reflection on strengthens and weakness of practicing style of work.

Diversify criteria	Technologic model	Humanistic model	Critic model
<i>The most important social problem</i>	Social development	Individual consciousness	Oppressive life's conditions
<i>Human ontology</i>	Finding human being	Acting human being	Free human being
<i>Crucial worth</i>	Democracy, prosperity	Self-realization	Freedom
<i>Context of education</i>	Social structure	Individual personality	„I” in society
<i>Ideal of education</i>	Social involvement	Integrated personality	Emancipation's orientation
<i>Role of teacher</i>	Leading	Maintain learning	Waking up consciousness
<i>Task for teacher</i>	Knowledge transmission	Competences' construction	Disputing students' identity
<i>Charakter of education</i>	Teaching	Learning	Critic reflection
<i>Ways of teaching</i>	Passing	Accessible	Socratics (dialogs)
<i>Role of experience</i>	Worthless	Potential Source of learning	Elementary sources of self-knowledge
<i>Position of teacher</i>	Domination	Partnership	Serving
<i>Responsibility</i>	Teacher	Teacher and students	Learner
<i>Effectiveness and education criteria</i>	Knowledge' reproduction	Skill of solving problems	Sill to change of life (emancipation)

In aspects of using individual model in education in IT scope it seems that model which connects all three mentioned should be preferable. This conclusion is connected with main goal of classes, which allow to acquire two types of main competences: a) instrumental – to know how it works (skills of using individual computer's applications and knowledge of Internet environment) and b) intellectual – which gives freedom in influence media on units and society understanding, and also knowledge about technical function of media.

Explanation of elaborated, ideal, eclectic model of education demands a little widen analysis, that's why narrowing the deliberations only to the effectiveness of education criteria, it is important that education allows on knowledge's reproduction, which let on theoretical finding out the root of function of electronic media (technologic model), separated solution its own problems using IT tools and using various applications and e-services to rise quality of life (humanistic model) with understanding in what negative way media are able to effect on the user and close friends (critic model).

Another equally crucial factor of a general education model is taking into consideration styles of learning individual persons. Perceiving obvious division that there are persons who have expect to acquire the knowledge by: sight, hearing or practical acting connected with individual determinants, which have an effect on entirety of acquiring new skills. Planning education activity it should be considered that most of people develop their own specific way of learning. In accordance with genetic equipment, past education experiences and features of present environment each learning person put his skills of learning above others. Perceptive teacher without advanced questionnaires is able to describe more or less a style of learning which is preferable by each members of group. Helpful, in this regard will be David Kolb's theory, who while describing process of learning of adults, offered to divide it on four cycle presented in below graph.

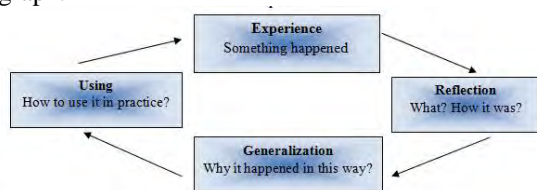


Fig.1 Adult learning process [5]

From above graph 1 three fundamental differences appear, which conditioning conduct classes. Additional “disrupting” factor is burden with preferable style of learning from person who planning the cycle of classes and teacher. Below all four style of learning were discussed with referring to example of didactic activities connected with education in IT scope among seniors [6].

1) *Convergental style* – preferable by empirics, persons who are open form changes, persons who learn by acting. Those students enjoys studying when they meet new experiences and problems which demand experience. They threat new tasks as a challenge, that’s why such activities like: exercises and stimulations are the most effective way. Considering training for this group it is worth to take into consideration abounding and dynamic plan of classes, using many exercises let for discover schemes of acting, showing interesting examples from many branches, non-standard exercises, open for participants’ ideas. In IT context this style of work can be implement in effective way among persons who have basic knowledge, which make an opportunity to use non-standard exercises for making by themselves. As an assumption, that senior is able to work on computer and use from benefits of Internet sources on European Computer Driving License ECDL level (E-Citizen) we may ask students for making similar task which connects knowledge from various areas (i.e. seeking the exact information on the web and write it down on the disc in indicated location and format). The content of exercise might be modify systematically by instructor according to seniors’ expectations. Obviously during making tasks the role of instructor is crucial, because he should be a person who control correctness of activities rather than making instructions step by step. This style of learning in group is suitable for intermediate and advanced users of IT.

2) *Assimilative style* – is chosen by students who prefer collecting data, seeking information considering at the same time the circumstances and making conclusions. For this group it is necessary to create the didactic environment without time pressure and support of other students. Well – thought out plan with few significant problems is important in realizing classes. Additionally, time for discussion should be booked, including studies of cases and indicating suitable rules of act. The exercise should be written with broaden instructions. Persons who are in this group use gladly from rich with content and pictures training’s materials. Methodic of education in IT scope those persons who are in this group demands preparation reliable training’s materials or using from handbook available on the market.

The participants in a course in this type of teaching prefer to be leaded by “step by step” method, while creating the atmosphere of slow acquire knowledge in individual applications or surfing on the web is closely connected with education needs. In the middle of discussing individual e-service it should be shown in ordered way and exhaustively way exact act. For example, discussing shopping on the web it is not enough to show only the website, but more useful is order the product, i.e. in trial version or real shopping some thing or service. In this case seniors regardless of style of learning, have needs to ask some bother questions, and make some observations about the application or the service.

3) *Diverengated style* – so called theoreticians are those who use this strategy the most often, those persons while learning are looking for relationship among issues, connecting observations in complicated logic entirety. They are learning easier, when they know purpose of classes and tasks to realize. Difficulties in process of didactic tasks’ realization may be emotions, especially uncertainty. Teacher in didactic work should be prepared for different points of view of seniors and leading discussion with participants. Making educational plan it is worth to consider timetable for this group, where one issue results another, for example discussing communication via Internet it should be shown theoretical in what way this process is acting and then after discussing typology (synchronic and asynchronic communication) present its types on exact examples. It is call for especially “theoreticians” receiving before classes detailed timetable with notes which applications will be discussed. Friendly atmosphere should be taken care, which will be understanding and sustained help holding a course of computer operation for seniors. On account of huge involvement of a leader, it is good for course groups if there will not be too many participants. Preparing training’s materials it is advantageous to use black schemes, pictures depict detailed applications’ service and assumptions connected with theory.

4) *Accommodation style* – is a style which is chosen mostly by group of people whoa re interested in using acquired knowledge in practice. Timetable should assume improving and acquiring exact activites without broaden introduction. It is recommended to start classes From presenting exact problem matter with everyday life, which is feasible to

solve thanks to IT tools. Before making timetable to reach educational satisfaction teacher should examine needs of his students in a range of expectations to individual applications or their categories, and then make a list of issues of the most repeated indications. Those seniors, who prefer this style of learning, prefer examples which are suitable to their real needs, so for example showing options in Word Program will be less efficient than making an official letter with using necessary options. Well prepared informatics laboratory is important for this group, because incorrectly working devices will discourage to study and undermine competences of a teacher. To sum up, it should be pointed out that despite domination of each of style of learning among individual persons, each participants of a course use from chosen elements of other styles. In complicated education environment there are no pure types of learning's styles which are suitable to one person, however, diagnosis of the style of learning, and the way of holding classes as well, is outlining desirable direction, which allows a teacher lead classes in comfortable way for older people.

### Few comments about continuously seeking an ideal model instead of simple ending

To show ideal state it is hard unambiguously outline the only right solution, because in a process of education of senior in IT scope does not exist. Consciousness of teacher realizing the classes is the most important by gaining appropriate model, the opportunity of selection of participants in a group taking into consideration uniformity their individual feature, level of fluency in operated tool. In addition a person who teach should not only control preferable by adult students styles of learning and teaching as part of his own pedagogic intuition.

To summarize, in times of moving idea of education for whole life on education practice creating methodic seniors' education, so to generate one entirety model is complicated process like in humane or social studies, where many indirect variables is very hard to reach.

Additionally, only the factors, which creates this model, have many blurred elements (i.e. mixed style of learning and teaching), due to it there is a question, is it reasonable to lead further discussions on ideal state? This question seems to be legitimate in a moment, when on education market more and more institutions, which educate older people in IT scope appear, and the teachers act repeated according to their intuition or reaches experience during holding classes with other age group. Nowadays, in Polish gerontology and andragogy literature there is lack of explicit solutions in this range, despite development of wide understood information society, moving forward demographical process, development of education sector for older people. Creating a concept of education model for seniors in IT scope and examine relationships, among its factors, making order previously knowledge, whereas its integration create favorable conditions in rising efficiency in acquiring knowledge and skills.

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