Mental, physiological and social characteristics of adult education as an effective mechanism for social inclusion

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Abstract

The issues of social exclusion and social inclusion have been studied from the perspective of human development. The role of education for the formation of inclusive society has been demonstrated. Mental, physiological and social characteristics of adult education have been analyzed. The conclusion has been drawn that adult education resists the involution processes, regulates the course of man's organic development and increases the level of social inclusion for every individual in society.

Keywords: social inclusion, social exclusion, process of social inclusion, society, human development, adult education

Psychiczne, fizjologiczne i społeczne aspekty edukacji dorosłych jako efektywnej formy włączenia społecznego

Abstrakt

Artykuł prezentuje zagadnienie inkluzji społecznej rozpatrywanej przez pryzmat edukacji dorosłych. Autor analizując właściwości edukacji dorosłych, podkreśla nie tylko jej korzystny wpływ na stymulowanie rozwoju psychofizycznego osób dojrzałych, lecz przede wszystkim wskazuje na jej znaczenie w procesie rozwoju społecznego tych jednostek. Definiuje edukację dorosłych, jako efektywną formę przeciwdziałania procesowi ekskluzji społecznej osób dojrzałych oraz formę wzmocniającą proces integracji społecznej.

Słowa kluczowe: inkluzja społeczna, ekskluzja społeczna, proces inkluzji społecznej, społeczeństwo, rozwój człowieka, edukacja dorosłych.
Introduction

Social exclusion is an obstacle to development and social progress of any democratic society. Ukraine, which today is in the active phase of European integration processes, on one hand, and political and socio-economic transformation on the other, declared the policy of building a social state of law. An increase in social inclusion level is an important task of Ukraine’s social policy in the spheres of labor market and employment, a function of its social institutions as guarantors of people’s economic activity, overcoming unemployment and creation of decent work conditions, and as a result, the key to stability in Ukrainian society and achievement of a high level of human development of the Ukrainian nation.

The need to overcome social exclusion for building just and democratic society is being actively debated by politicians, social workers and the scientific community. However, currently there is no unanimity in understanding the nature and determinants of social exclusion and the mechanisms to overcome it. One thing is clear: social inclusion as a process of combating social exclusion covers different aspects of life of an ordinary member of society, including economic, social, political, psychological spheres and requires scientifically based knowledge about the reserves and resources of a human development, a true potential of this development factors which are not sufficiently used by society. Creating of appropriate conditions for sustainable human development would imply overcoming the barriers and accelerating the processes of inclusion which expand opportunities and freedom of every member of society, i.e. the inclusive society in which diversity is strength, not weakness. Under these conditions, the study of mental, physiological and social characteristics of adult education as an effective mechanism for social inclusion is considered a relevant and timely researched problem.

Social exclusion and social inclusion: the statement of the problem

Social exclusion describes the wide range of social and economic processes that lead to exclusion of some individuals or entire groups of society from social relations, practices and lifestyles familiar to society. Due to manifestations of social exclusion the individuals or groups in society which are vulnerable to it are not able to take full advantage of the rights to education, health, employment and adequate standard of living, meet cultural, religious and social needs regardless of race, social status, ethnic origin, religion, sex, age or abilities. In modern conditions the problems of social exclusion are associated not only with the reproduction of social inequality, but with a gap of social relations and identity crisis, covering a large part of society.

Social exclusion is a process whereby some individuals or specific groups in society are not able to participate fully in public life because of their poverty, lack
of basic knowledge, abilities or capabilities, or as a result of discrimination. Out of doubt, it separates them from employment, income and education opportunities as well as social and public institutions and activities. Socially excluded people have limited access to power and decision-making by authorities and thus are often unable to participate in the process of developing and making decisions that affect their daily lives. The above suggests that social exclusion is a manifestation of the violation of basic human rights – the right to quality education, health care services and health protection, to a decent standard of living, access to cultural heritage, protection of their interests and participation in economic, social, cultural and political life in general – and it is a sign of a low level of human development in the country. The negative impact of social exclusion lies in the fact that some individuals or groups, or even entire societies suffer from a number of related problems such as high level of unemployment, poor skills, low incomes, poor living conditions and so on. It is important to understand that social exclusion is not a static phenomenon; it can affect every member of society. For each person there is a risk of being “outside” the society, and it results in further escalation of the problem specified.

All the above induces various international institutions and government agencies to study social exclusion in order to specify its size and determinants. As an example is the examination of social exclusion in Central and Eastern Europe and Central Asia in 2009, held with the support of UNDP. The said survey was conducted in six countries – Serbia, Macedonia, Moldova, Ukraine, Kazakhstan and Tajikistan. The basic unit of analysis and unit of observation was a man (aged 15 and above). In each country 2700 interviews were conducted. The results of the examination of social exclusion were the basis for the Regional Human Development Report “From transformation to the society for everybody”, which is the basis for the National Report on Human Development named “Ukraine: Towards social inclusion” (Libanova, E., Levenets, Yu., Makarova, O. et al., 2011). The Report draws attention to the causes and characteristics of social exclusion in Ukraine, identifies socially excluded groups and offers a number of recommendations for developing policies and programs to overcome barriers on the way to social inclusion by all segments of the population. The Report studies the matter of social inclusion from the standpoint of human development and it emphasizes that both concepts – social inclusion and human development – are complementary and mutually reinforcing. The Report provides examples of individual manifestations of exclusion that demonstrate the scope and depth of problems faced by vulnerable people. It also proposes a new methodology for assessing the multidimensional aspects of social exclusion, which allows identifying priorities more accurately and improving the targeting of social inclusion policies. In turn, the
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Policy of social inclusion into public life includes both measures to accelerate economic and political reforms aimed at a comprehensive rehabilitation of social and economic conditions for sustainable economic growth, to ensure access to basic social services, economic resources, etc. for all segments of the population, and point measures aimed at overcoming barriers to attract certain segments of the population to social life (Libanova, E., Levenets, Yu., Makarova, O. et al., 2011, p. 20).

In the Report the driving forces of social exclusion are considered according to major spheres of life: political, cultural, economic and social. From the standpoint of our research exclusion from economic life and exclusion from the sphere of culture and education as interrelated and mutually caused phenomena are of certain interest.

Exclusion from economic life entails low standard of living, and, consequently, limits the opportunities to obtain access to necessary health services, participation in cultural and social life of the society. Unemployment or low status in the labor market and the lack of income that prevents access to resources, goods and services, are the main driving forces of exclusion from economic life. The greatest risk of social exclusion in the labor market exists for the following groups: the unemployed, especially in case of prolonged unemployment; certain categories of economically inactive people, including people who have stopped searching for a job because of the loss of hope for employment; workers with non-standard labor contracts or conditions of a particular type of work that contribute to their vulnerability (Libanova, E., Levenets, Yu., Makarova, O. et al., 2011, p.16).

Studies show that the degree of exclusion in the labor market is largely dependent on the availability of education. It is least common among the people with complete higher education, regardless of gender and place of residence; it is most common among the people with basic higher education (especially among women and urban residents). More than half of the unemployed have completed secondary education. The lack of completion higher education leads to an increased risk of social exclusion from the labor sphere. Under such circumstances, education is seen as an important tool for not only reducing the initial inequality among the youth, their climbing up the social ladder, but as a condition for successful integration into society and active participation in the social life of the entire productive workforce. The level of education is an important factor in human entering the labor market, of competitiveness formation and of a certain socio-economic status throughout life, and the problem of social exclusion from education is one of the most relevant in the process of an inclusive society formation. That is why the matter of equality of educational opportunities and access to education for different population groups is considered primarily as a social problem that is closely related to the ideas of social justice and social equality. At the same time, access to
education is defined not as the ultimate goal, but as an important factor in ensuring social cohesion and social stability in society.

Equal access to education is associated with the existence of such an educational environment where individuals can consider options and make choices for life, based on their own talents and abilities, not on the basis of stereotypes, biased expectations or discrimination. This educational environment provides economic and social opportunities regardless of gender, ethnicity, race, age or social status.

Thus, recognizing the relationship between the level of education of each member of society and human development in general as indisputable fact, we note that the elimination of social exclusion from education, various institutional and financial barriers to education is a prerequisite for achieving overall progress in development of a society. At the same time, understanding the mental, physiological and social characteristics of adult education as an effective mechanism for social inclusion can significantly speed up the process.

**Adult education as an effective mechanism of social inclusion: mental, physiological and social characteristics**

As a result of inherent development of sciences about man these days our views of man as the subject of his activities in various spheres of social life have greatly expanded and become more complete. According to the researcher B. Ananiev, for social forecasting people need scientific knowledge about the reserves and resources of human development, the true potential of this development, which the society does not use in full (Ananiev, B., 2001, p. 4).

Today understanding of learning as the main form of human life in which man is engaged throughout his life has become commonly accepted. Thus, based on the main provisions of psychological and activity theory (A. Leontiev, S. Rubinshtein, V. Davydov) learning activity is conceptualized not as a purely mental process, but as a systematic combination of mental, physiological, social and practical aspects of human life. Humanistic psychological theory (C. Rogers, A. Maslow) substantiated the leading role of man's desire for self-realization in all kinds of his/her activities, including education. The above psychological theories, philosophic and anthropologic social theories led to the understanding of the individual's leading role in the organization of his activities, including education. Finally, physiologists, sociologists, and psychologists (B. Ananiev, L. Burlachuk, Ye. Stepa-nova, Yu. Kuliutkin) demonstrated that man can successfully learn for almost all his/her adult life. The research results of psycho-physiological and socio-professional characteristics of adult learning are presented in this paragraph.

As it is known, individual human development is the ontogeny with phylogenic program which is laid in it. Succession of stages or phases of individual development
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(from birth to aging) is clearly defined by the mentioned program and species features of Homo Sapiens. In human ontogeny contradictions between different vital functions regulators, including heredity and environment, social functions, roles and position etc. emerge and are overcome. Characteristic features of the manifestation of such ontogeny contradictions are uneven changes and heterochrony of human development phases, which are powerful factors for different possibilities of human life – from premature aging to prolonged longevity.

For a long time it had been thought that uneven changes and heterochrony of development phases is a sign of growth and maturation processes of the human body. However, modern psycho-physiological, morpho-physiological and biochemical studies of the human body development have proved that uneven changes and heterochrony of development phases are observed throughout life. Moreover, the establishment of the organism integrity and its stabilization at a certain optimum for a particular stage of development, in turn, allows regulating involution processes in the human organism.

Stage flow of the holistic human life cycle involves the succession of stages of the individual's evolution and involution. Key factors of age-related changes in the dynamics of the life cycle are a temporal succession of each phase and its duration. At this, it will not be right to consider the “stage development” as a kind of conservation in terms of static indices for the dynamics of age-related changes. In the middle of each previous phase the resources and potential for further development are formed. It is this very feature that explains the effectiveness of targeted forms of social control of the individual development in further ontological human evolution. These genetic relationships between individual phases of human development are the basis of ideas about the individual as an integrated complex of a self-regulating system.

Investigation of individual human development laws requires that the life cycle should be divided into periods, and the relationship of age and landmark moments in the individual's development should be studied. To understand the human's life cycle it is important to realize not only the topology of development (sequence, unidirectionality, and irreversible stages), but also the metric of certain points of development (total lifetime, duration of individual stages). Both of these characteristics are represented in most of existing age periodizations.

Age of man, as a man in general, is the interpenetration of nature and history, biological and social, the convergence of which is reflected in a certain phase of human life and genetic relationships between the phases. That is why, as the researcher B. Ananiev says, age-related changes of certain characteristics of man are both ontogenetic and biographical; it is these changes that allow making a conclusion of not only individual psychosomatic and socio-psychological shifts, but also of their dynamic relationship. In this sense, the age factor acts as a sum of diverse influences of growth,
general somatic, sexual, neuro-psychological maturation, and other phenomena of organic development that converts in terms of education with cultural development as the assimilation of social experience, historically established knowledge and rules of activity (Ananiev, B., 2001, p.102).

Age features of an adult (from youth to old age) are characterized by the fact that difficult inter-tangle of evolution and involution processes is determined by the dominance of either one group or the other of them, depending on the specific socio-historical conditions of man’s life and status of his/her own activities (work, communicative, gnostical). It is important that this feature is characteristic not only of sensory-perceptual processes, but of higher mental functions of human intelligence (Ananiev, B., 2001, p.123).

Among the variety of periodizations the classification of individual periods of human development, which was offered by D. Bromley (Bromley, D., 1966, p. 416), should be emphasized. The researcher divides life into five cycles: the stage of pregnancy, childhood, adolescence, adulthood and aging. Each cycle consists of several stages, characterized by age dates and general features of development. In particular, the cycle of adulthood, which is the subject of our analysis, consists of four stages: 1) early adulthood (21 to 25 years); 2) middle adulthood (25 to 40 years); 3) late adulthood (40 to 55 years); 4) before-retirement age (55 to 65 years).

Early adulthood which implies mastering of the adult role (law maturity, elective rights and economic responsibility) characterizes the stage of complete inclusion into all kinds of social activity in the country. At this very stage one’s own family is created and professional roles are adopted. Middle adulthood, according to D. Bromley’s classification, is “peak years”, optimums for intellectual achievements, consolidation of social and professional roles, leadership in different kinds of activities, insignificant decrease of physical and mental functions at maximum exertion.

Late adulthood is characterized by establishing social and professional roles with some of them dominating or weakening. The average value of this stage of development is 45-50 years. At the before-retirement stage with evident physical and mental decrease at the background, one can observe a “peak” for most common social achievements that is position in society, power and authority.

Research of sensory-perceptual processes of human development has allowed drawing a conclusion about their heterogeneous character at different stages of the life cycle. The subject of some researches has been age-related changes: vibration sensitivity (T. Howell, J. Birren), tactile sensitivity (I. Shtern, V. Nikitin), light- and sound-sensitivity (M. Aleksandrova, A. Ustynova) et al. The results of numerous research works prove the influence of ontogenetic evolution of man’s psycho-physiological functions on the development of the individual as a personality. The subject of some research works has been age-related changes: field of vision (B. Ananiev, Ye. Rybalko),
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time of reaction (Ye. Boiko, B. Philip, F. Goodenough), periphery sight, hearing, kines-thesia (P. Lagarev, K. Kekhcheev) et al. The results of the majority mentioned researches prove the compliance of ontological evolution of sensory-perceptual and psychophysical processes with a certain curve – a gradual increase of the indices to the age of 18-25, then stabilization to the age of 25-50.

![Graph showing the curve of intellectual functions development](image)

The mentioned curve also allows describing psychical functions of the human intelligence. Most of researchers establish rather early terms for emergence of optimums of functional development and gradual decrease of functional capability for thinking, memory and attention with the age. In S. Pako’s opinion (Pako, S., 1960, p.92) optimum of the intellectual functions development is between the age of 18 and 20 years. If you consider logical ability of a 20-year-old person to be the etalon, then at the age of 30 it will equate with 96, at the age of 40 with 87, at the age of 50 with 80, and at the age of 60 with 75 of the etalon. The researcher supposes that the optimum of intellectual functions is achieved in early adolescence, and the intensity of their involutions depend on the two factors – natural gifts (the internal factor) and education (the external factor).

The researcher B. Ananiev, referring to the works of V. Ovens and L. Shonveld, points out that verbal-logical functions which achieve the first optimum in early adolescence can be increasing by the age of 50 and be decreasing only after the age of 60 (Ananiev, B., 2001, p. 124).

In D. Wechsler’s research work (Wechsler, D., 1944, p. 272) it has been demonstrated that the intellectual development in the form of evolution embraces the period from the age of 19 to 30 years. In spite of the fact that some intellectual functions which are firstly connected with motor activity decline after 30, the peaks of others, on the contrary, achieve their maximum at the age of 40 (10,5 compared to the age of 17 when the mentioned function was evaluated as 8,4). Moreover, the total correlation of the data on adolescent (18-19) and middle (25-34) age has demonstrated that high-
er indices of intellectual functions are revealed in the middle age, and it contradicts the position of a number of researchers who stand up for the adolescent optimum of the intelligence functional development. The given example again and again proves the fact of heterochrony of the functional development depending on conditions, in particular, of practical form of mental activity, education, level of mental operations formation, motivation etc.

Research works by P. Baltes and his colleagues stand up for stability and intelligence growth which are typical of adults (Baltes, P., Brim, O., 1984). Suggested by P. Baltes model of intelligence development in mature age operates with four categories: plasticity, multi-dimensional character, diversity and inter-individual variability. Plasticity of intelligence is a possibility of changes in the individual’s intelligence. The surveys on the intellectual training of elderly people demonstrate availability of plasticity in their intellectual functioning. Multi-dimensional character is built on the suggestion that intelligence is composed of many abilities having specific structural properties which are changing with the human development. It has been experimentally proved that with age psychometric abilities become more closely bound and the number of intelligence factors which are detected with the help of factor analysis diminish. Diversity implies appearance of different structural changes which affect various abilities throughout life. Inter-individual variability foresees considerable differences in intellec-tual development of elderly people (Baltes, P., Brim, O., 1984). From the source men-tioned it is possible to conclude that in a certain age group in some individuals one can observe weakening of intellectual functioning, in others – stabilization or even intellec-tual functioning rise. Mutually defined constructs create a dynamic basis for arranging the information on the adult’s intelligence development.

As the researcher L. Burlachuk fairly points out, Baltes’ neo-functionalist con-ception appears to be two-process model that is composed of two interrelated processes of development. The first process is knowledge for knowledge’s sake. With the help of this process it is possible to describe age changes in principal forms of thinking which are connected with information processes and solution of the tasks that take place in the first third of human’s life. The second process is a pragmatic intelligence that is connected with principal cognitive skills and other intellectual resources which are gained owing to realization of the first process while solving everyday cog-nitive problems and adaptation to environment.

The second process is supposed to be the most significant for the last two thirds of life. Relating the adult’s intelligence to successful functioning in the environ-ment Baltes assumes that the tasks of tests for measuring intelligence are not always equally efficient while they are used in different periods of human life. While measur-ing child’s intelligence researchers agree that the tests should be different for various periods of childhood; at the same time possibility of having different tests for the pe-
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tion of adulthood is practically not discussed. The researches of Baltes and his colleagues prove that pragmatic intelligence characterizes adults’ intellectual life to a greater degree than traditional cognitive abilities do. At this, specific manifestations of pragmatic intelligence vary from person to person depending on distinctive features of individual adaptation. In general, Baltes claims that everyday intellectual abilities and crystallized intelligence become of great importance with age (Burlachuk, L., 2002, p. 230).

There are also other examples proving heterochrony of evolution and involution of intellectual functions similar to heterochrony of sensory-perceptual functions. It allows to draw a conclusion that the ideas of the peaks or optimums in a certain period for all functions are groundless. Moreover, modern experimental data prove a great number of such optimums for different functions which allows compensating the decline in some functions of temporal (situational) or permanent (involution) character. Besides, the psychologist L. Burlachuk carried out the analysis of studies on age-related intelligence differences. In the researcher’s opinion, it is wrong to consider that no changes occur in the intelligence of different age periods which can be studied as a process manifesting itself as learning abilities, abilities of abstract thinking etc. (Burlachuk, L., 2002, p.180). However, age-related individual differences in intelligence cannot be reduced to its quantitative index. Referring to the results of Seattle Longitudinal Study (SLS – Seattle Longitudinal Study), which began as far as 1956 (6 test cycles were carried out from 1956 to 1991) and is still going on, the researcher claims that age-related IQ decrease is quite small or unavailable at all. IQ decrease seems to be comparatively moderate even at the age of 80-90 (Burlachuk, L., 2002, p.224-225). A considerable part of Seattle Longitudinal Study in 1980-1990-ies was devoted to scrutiny the reasons which determine the decrease in results of abilities testing in elderly people. Among such reasons poor health, inactivity, motivation weakening etc. are mentioned. Referring to G. Rudinger’s studies, the psychologist L. Burlachuk asserts that elderly people’s intellectual potential to a greater degree depends on social factors. Thus, dependence on education amounts to 20-30%, on occupation – 20%, on sex – 7-15%, on state of health – 8%. Nevertheless, we share the author’s point of view that the decisive role of social factors in presence or absence of age-related IQ decrease proves insufficiency of this index for the analysis of the age-related changes in intelligence (Burlachuk, L., 2002, p. 228). One should also carefully attend, L. Burlachuk says, to the signs of the age-related intelligence decrease which are officially registered by tests. For, in such cases a question is to be raised whether significance and content of intellectual abilities have changed with age to such a degree that the tests evaluate the processes which are incommensurable in their essence. The decrease in quantitative indices of non-verbal intelligence with the age that has been marked by B. Ananiev and other researchers is determined by specific for tests requirements of
visual-motor coordination and the speed of performance. However, L. Burlachuk continues, well-known age-related decline of speed, accuracy and coordination of actions is possible at the time when quality of intellectual activity is preserved, namely its level has not fallen down. In particular, the researcher provides the results of a study devoted to specificity of non-verbal imaginative problems solution (Bongard’s problems) by Abkhazia residents aged 83 to 103 years. The control group consisted of people aged 31 to 55 years. The study has shown that the accuracy of problem solving in both groups was similar, and the speed of their solving by elderly people exceeded the average values of the control group (Burlachuk, L., 2002, p. 231).

In the so-called operational models of adults’ intelligence development, L. Burlachuk says, the qualitative changes that occur with age, new cognitive structures are studied. In particular, the researcher B. Dodonov notes that reduction of a well-known ability to accumulate information and handle it by an elderly person can be compensated by further enrichment of person’s attitude to the environment (Dodonov, B., 1985, p. 44). According to L. Burlachuk, a young person’s intelligence can not be identical to that of an elderly person. If the first category is more willing to solve new problems, to accumulate knowledge, the second category is characterized by the ability to solve familiar problems based on experience (Burlachuk, L., 2002, p. 228).

From the standpoint of our study, of a certain interest is sensitization of functions of ontogenetic evolution of a human development in the course of professional activity. Here, a biphasic character of the same physiological functions of man can be observed. During the first phase the frontal progress of functions in the course of maturation and early maturity of evolutionary changes (early adolescence, late adolescence, and early middle age) can be observed. Usually, in this phase, the peak of a certain function is evident. During the second phase a “specialization” of certain functions with respect to professional activities or important areas of life takes place. The mentioned second phase begins only if the functional achievements in the first phase happened, and the first phase seems to be “imposed” on the second one. Thus, the peak of functional development is achieved in more mature age and it is possible that the optimum of specialized functions may coincide with involution of general properties of these functions. As B. Ananiev notes, biphasic development of psycho-physiological human evolution is one of the manifestations of man both as an individual and personality, the subject of activity (Ananiev, B., 2001, p. 128). The duration of the second phase is determined by the degree of the activity of man as a subject and personality, his/her work productivity and social significance of his/her contribution to the general fund of material and spiritual values of society.

Recent studies have revealed the phenomenon of slowing the aging processes caused by social determination of organic human development. This phenomenon is
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not caused by human genetic mutations, but a life experience of a modern man in the process of individual development. It is the human activity which is associated with a number of factors that contribute to the stabilization of vital functions at a high level in the age of maturity. Accelerating of maturation and slowing of aging result in the expansion of a range of middle age changes, time increase in the flow of the most active and productive phases of human life. The constant mental activity, high social activity and creativity are the factors that resist involution processes and regulate the course of organic human development. The researcher P. Allman, analyzing psychologists’ studies on the ability of a person to study throughout life, comes to the conclusion that this ability is practically not reduced for life and points to the “plastic” model of an adult’s development. According to this model, these are historical and social factors rather than aging of personality that affect intellectual processes (Allman, P., 1983, p.107–118).

Thus, based on the analysis of numerous studies devoted to sensory-perceptual, psycho-physiological and intellectual functions of man’s ontogenetic evolution, we conclude that adult education is not only possible, but necessary factor which resists involution processes, regulates the course of man’s organic development and increases the level of social inclusion for every individual in society.

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