

THE STUDIES ON RELAXATION IN POLISH PEDAGOGICS

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Relaxation may play an important role in the practice of pedagogy. First of all, it is used in pedagogical therapy in the form of various methods and is usually applied in order to aid the therapy of children and teenagers with specific developmental or behavioural disorders, e.g. in speech therapy. It is also used in health promotion, guidance, sociotherapy, self-education work, in kindergarten and early school classes as well as during physical education lessons.

Keywords: relaxation, pedagogy, methodology, education

The main aim of my paper is to present the results of the research carried out by Polish pedagogues on relaxation and its role in the education process, as well as its connections with pedagogical sciences and other fields of pedagogical practice. As regards methodology, the realisation of the above mentioned goal requires both problem solving and synthetic attitude. Due to the interdisciplinary character of relaxation as such and its connections with various medical, psychological and pedagogical sciences, the text contains references to these sciences, respective research works and discoveries made in these fields. Interdisciplinary attitude seems especially justified, since pedagogics is expected to consolidate the entire knowledge about man, his essence and development, using for this purpose the achievements of other humanistic, social and biological sciences. It may bring measurable advantages both to pedagogics as such, and its related sciences, as well as to the practice of pedagogy (Palka, 2010).

Modern understanding of relaxation as connected with the process of education appeared in science already at the end of the 19th century. In 1890-ties William James, American physiologist, philosopher and psychologist, also interested in the philosophy of education, claimed in his published lectures, including the lecture for physical education women teachers, entitled: "Gospel of Relaxation", that using all types of vital energies as well as being in the state of deep inner peace is among the most important human life ideals and thus among the highest human values. Such kind of experience which combines the states of both creative tension and peaceful relaxation constitutes the best of all possible human experiences. Moreover, the scientist noted that his contemporary Americans were more stressed as a result of their more and more feverish, hectic, intensive, fast lifestyle, full of anxiety and fear of the future. Unlike other scientists of his times, he believed that the beginning of what we now might call spreading of the philosophy of consumptionism was to be blamed for this situation. An

antidote to the above mentioned problems would be the implementation of a program based on relaxation training using simple methods of relaxation, such as relaxation exercises, working with breath, imagination and suggestions. Spiritual aspect in James' views is connected with practising "God's presence" – the state of "not caring", being simple-hearted and relaxed in face of all daily cares and fears, which can result in spiritual insight and experiencing benefits of the described states until the end of one's life. This can be attained by a Christian, or a Hinduist alike, by any man, indeed (James, 2010).

Also Charles Baudouin who was a French-Swiss philosopher, psychologist, psychotherapist and psychoanalyst, presented modern understanding and description of relaxation even earlier than Johannes H. Schultz and Edmund Jacobson. He did so in his work "Suggestion and autosuggestion", first published in 1919. For Baudouin, suggestion as an ordinary psycho-physiological function plays an essential role in upbringing and takes two forms: acceptance – which occurs as physiological function and remains outside conscious control of man, and realisation, being the essence of autosuggestion, that could be used in upbringing and self-upbringing in order to achieve goals we set ourselves. Suggestions materialise in an unconscious process without the necessity to focus one's attention or will; feelings and proper attitude of the environment are very helpful in this process. Relaxation is a means of accessing the potential hidden in subconsciousness, imagination functions without the limitations of rational mind while practising autosuggestion since an early age allows to achieve goals set by an individual (Baudouin, 1921).

Among the theories explaining stress and stress reaction we can mention the theory of homeostasis and "fight or flight" reaction by Walter B. Cannon, GAS theory of stress created by Hans Selye and A-B-C model of psychological disturbance by Albert Ellis (Everly & Rosenfeld, 1992). All of these are psycho-physiological in nature; however, they do not directly postulate the existence of a separate physical reaction – relaxation reaction – as opposed to stress reaction. Such theory was advanced only by E. Jacobson, J.H. Schultz, and in the most complete form by Herbert Benson, and with time has been well proven empirically.

According to the research carried out by Jacobson, body can be either in an active or in a relaxed state. Activity is accompanied by stress, which, if excessive, appears not only in striated muscles but also in smooth muscles of which for instance heart is built. In case of strong anxiety, body stress increases, especially in muscles, while permanent stress leads to physical dysfunctions and diseases. The use of progressive relaxation created by Jacobson teaches to gain more control over the stress level as well as relaxation of muscles. Jacobson published his findings in specialist medical journals in 1929 (Kokoszka, 1993).

Schultz, in turn, published his first introduction to his autogenic training in 1928. He claimed that man can single-handedly effect changes in the hierarchy of autonomic nervous system functioning (when parasympathetic nervous system begins to dominate over the sympathetic one) owing to the proper autogenic training, including both basic autogenic training and its advanced level – autogenic meditation. When one systematically practices the exercises, he can also shape the desired personality traits such as: perseverance, willingness to cooperate and better understanding of oneself. Moreover, he will be dealing more skilfully with fear, uncertainty and depression as well as faster regenerate physically and psychologically (Kratochvil, 1980).

H. Benson created the theory of relaxation response based on empirical research. He defines relaxation response as a psychophysiological state of body, a trophotropic body response that allows its physical and psychological regeneration. Such reaction is inborn to every human being and constitutes a mechanism opposite to “fight or flight” reaction as described by Cannon, while its aim is to provide protection against stressors. It is characterised by decrease in oxygen consumption and carbon dioxide output, decrease in rate of breathing and blood lactate levels. It is noteworthy that low blood lactate level is an indicator of the sense of peace, while high level indicates fear and agitation. Moreover, during the relaxation response, the following reaction were noted: the decreases in blood pH level (its high level indicates lack of energy and chronic fatigue) and heart rate, more alpha and theta waves in neocortex, as well as increase in skin resistance. Benson found that relaxation techniques have been developed and are known in many cultures; however, they usually have religious connotations. He studied these methods, including hinduistic transcendental meditation (TM), Zen meditation, yoga meditation, autogenic training, progressive relaxation, deep relaxation induced by hypnotic suggestion, Sentic Cycle and others. As an effect he proposed his own technique. It is a simple form of meditation (modelled on TM), which involves repeating silently to oneself a selected religious or secular word or a phrase for a dozen or so minutes, with concentration and while in a comfortable sitting position. He also called it “relaxation response”. Later Benson proposed more complex and advanced techniques connected with visualisation (modelled on Tibetan Buddhism practices) and included his relaxation techniques in the health program. During numerous seminars organised for various professional groups, including teachers, he emphasized the importance of introducing these exercises into the general education system including schooling of children and teenagers (Benson & Klipper, 2000).

The beginning and progress of Polish research on relaxation and its application

Several scientist who lived on the territory of Poland which, however, then, at the beginning of 20th century was not sovereign, became interested in relaxation. Professor Wincenty Lutosławski, W. James’ friend, particularly stood out among them. In his book published in 1908, titled „Rozwój potęgi woli” (“Development of willpower”) he presented exercises which he developed himself. They were modelled on yoga and included relaxation techniques based on physical exercises and imagination, as well as breath regulation techniques. He claimed that these exercises could help to deal with negative emotional states such as anger, negative attitude or pessimism, with addictions such as smoking, and also with laziness (Lutosławski, 1923).

Just after the end of the II World War, Stanisław Komorowski, a doctor from Cracow, made relaxation a part of psychotherapy. Since 1951, two professors of medicine, Julian Aleksandrowicz and Stanisław Cwynar, used relaxation to treat nervous exhaustion, hypertension and gastric ulcers in Żegiestów and Cracow. They published a book entitled „Relaks” (“Relax”) that came with a record teaching how to induce relaxation. Additionally, J. Aleksandrowicz emphasised pedagogical questions connected with relaxation, self-education in particular. According to him, the state of relaxation and peace enables deeper insight into oneself and develops those personality traits that are desirable as regards social interest. Therefore, it should free man from fear and sense of guilt, help him to gain self-

confidence, become active and creative. Being aware, like Benson, of the interdisciplinary dimension of research works and applications of relaxation and its connection with pedagogics in particular, J. Aleksandrowicz proposed cooperation in this field to a renowned educator, Professor Andrzej Szyszko-Bohusz. As a result, the second edition of the above mentioned work, with an additional chapter on pedagogics, was published under the title „*Relaks. Wskazówki dla lekarzy i pedagogów*” [“Relax. Instructions for doctors and educators”] (Aleksandrowicz, Cwynar & Szyszko-Bohusz, 1976).

Significant input into research on relaxation has been made by Polish representatives of sciences other than pedagogics – medical and psychological sciences in particular. I list several of the most renowned of them hereunder. We shall undoubtedly mention professor Wiesław Romanowski, scientific editor of an extensive work titled „*Teoria i metodyka ćwiczeń relaksowo-koncentrujących*” [“The theory and methods of relaxation-concentration exercises”], professor Stanisław Grochmal, who was the editor of subsequent editions of the book, as well as M.A. Stanisław Pasek. Each of them was a physiologist who wrote an extensive, several dozen pages long, chapter on studies of relaxation and relaxation systems such as yoga, Zen or sophrology, included in the above mentioned work (Romanowski, 1975). Professor Andrzej Kokoszka, a representative of medical sciences, created so called multilevel model of states of consciousness in relaxation, which has been presented to scientific circles in the USA. He is also an author of scientific publications on this topic (Kokoszka, 2009). Apart from Professor A. Szyszko-Bohusz, Professor Stanisław Siek, a psychologist, is the most renowned Polish researcher of relaxation, as well as the author of numerous books on the topic. His works contain rich research material connected with relaxation, as regards human personality development, and also elaborate scenarios of relaxation trainings (Siek, 1990). Similarly, a social psychologist, professor Stanisław Mika is the author of work entitled „*O różnych drogach samodoskonalenia*” [“On various ways of self-development”], in which he presents, among others, oriental methods and techniques of self-improvement, connected with relaxation and meditation (Mika, 1992). Tadeusz Doktor, Ph.D., a psychologist and religion sociologist has also written several scientific works that focus on the same issue, „*Orientalne techniki relaksu i medytacji*” [“Oriental techniques of relaxation and meditation”] among them (Doktor, 1993). Research on relaxation in Poland has been continued until present time, very often in connection with the fields relevant to pedagogics.

Studies on relaxation pursuant to Polish pedagogics

Professor Maciej Demel has made a significant contribution to the pedagogics of health in Poland by introducing, among other things, a new pedagogical category of health education. Together with Alicja Skład, in their work titled „*Teoria wychowania fizycznego dla pedagogów*” [“The Theory of physical education for educators”] he also described the first attempts at conducting studies on relaxation among actors and students of pedagogics at Warsaw University, proving that properly selected fragments of prose and poetry are conducive to the state of relaxation (Demel, Skład, 1970).

Between 1961 and 2005, Professor A. Szyszko-Bohusz, a philosopher and educator who especially focuses on the theory of education, studied almost 1000 primary school students and 5000 university students in order to verify the hypothesis about the positive influence of relaxation practiced during school classes and at home, on the following aspects of the subjects' personality: physical constitution, emotional, intellectual, volitional, social and moral sphere, as well as about the usefulness of relaxation for making the process of self-education and achieving better results in education more interesting and for intensifying it. The research proved that relaxation improves mental and physical well-being, eliminates or alleviates unpleasant emotional tension and conflict situation in which the subjects found themselves. It has also been noted that relaxation favourably influenced intellectual processes (particularly as regards problem solving), volitional sphere, making decisions in difficult situations; it boosted self-confidence and improved social functioning. Vast majority of the subjects experienced relaxation exercises as positive, noted that they improved their behaviour at school and outside school as well as improved their performance at school. There has also been an improvement in overcoming exam stress, beneficial changes in the way the subjects spent their free time, as well as in social and moral attitudes. Practising relaxation turned out to be helpful also in self-observation and fighting bad habits. Moreover, it intensified joy of life, optimism, and increased vigour, improved the quality of sleep and rest (Szyszko-Bohusz, 1979, 1998). Professor Szyszko-Bohusz created a new pedagogical direction in Poland, i.e. holistic pedagogics which concentrates on supporting the development and betterment of both teacher's and student's personality, which seems to be of utmost importance nowadays, in the times of crisis of scientific and technological civilization, in the time of decline of moral values and threats to humanistic values. Professor especially refers to Jan Henryk Pestalozzi, Abraham Maslow, Carl R. Rogers and Fritz Perls, whose efforts led to the emergence of humanistic psychology and Gestalt pedagogics, as well as greatly influenced humanistic pedagogics (Szyszko-Bohusz, 1989).

Professor Janusz Gnitecki, educator and methodologist of pedagogical research, had been conducting studies which involved 8500 students of primary schools and universities for over 25 years, investigating, among others, the effectiveness of so called superlearning implemented through a specially developed educational project. He based on science and practical application of relaxation, visualisation and affirmation by teachers and students alike, as well as on using proper vocabulary and special tasks which required creative and reproductive thinking to be solved. His work was undoubtedly inspired by the achievements of a Bulgarian scholar Georgi Lozanov. He has claimed that by using his suggestopedia student can learn a language approximately three times as quickly as through conventional teaching methods (Teml, 1997). Gnitecki claimed that superlearning is possible at every age, but is particularly effective in children at pre-school and early school age. Superlearning can also be applied to solving problems in any field. Gnitecki postulated that in order to advance children's and teenagers' cognitive development, a superlearning program shall be introduced to general education, that would use relaxation, visualisation and affirmation methods, synchronisation of left and right brain hemispheres and would open consciousness and subconsciousness to going beyond earlier and current experiences (that limit human potential); he also postulated conscious efforts in order to adopt a program that would stimulate development through solving integrated school tasks. A teacher, who would be realizing such project aimed at students' growth, would have to himself

be expert in relaxation, visualisation and affirmation. Moreover, he would have to overcome pedagogical materialism and be willing to contribute to the development of others (Gnitecki, 1998).

Lesław Kulmatycki, Ph.D. and a professor at the University of Physical Education, who specializes in the issues of health promotion, is close to Benson in his understanding of relaxation. Among its benefits of psychological character he lists the following: mental calmness, being in the present, sense of control over oneself and the situation, patience and willingness to remain in the described state. Between 1996 and 1998 he studied over 100 senior students of primary school, who attended so called "lessons of relaxation" – eight weekly meetings, each about an hour long, during which they actively learned relaxation techniques. The aim of the study was to obtain information about organising relaxation courses for teachers and preparing suitable educational aids for students. The results of the study demonstrated that the transfer of knowledge in contemporary (primary) schools occurs in the atmosphere of stress and competition with "upbringing" being pushed to the background. The children who took part in the study most frequently experienced stress in internal body organs – as increased heart rate, abdominal pain and psychological stress which disorganised thinking, concentration and memory processes. Teenagers most appreciated beneficial effect of relaxation on psyche, such as calmness, balance, sense of security, self-confidence. Only after that they indicated decreased muscle tone, regular and calm heart rate as well as improved concentration and willingness to talk to others. They most often pointed to natural environment, then family and also peers as environment most conducive to relaxation (imagined as the place in which it occurs – so called refugium); however school was never mentioned in this respect. Professor Kulmatycki presented the following recommendations based on the results of his study: voluntariness of participation in the relaxation classes, variety of applied techniques, the possibility to initiate the process of genuine school education based on relaxation and authentic relations between a teacher and his students, combining relaxation classes with health promotion among children and teenagers (Kulmatycki, 2002). It is worth noting that L. Kulmatycki has been the first person in Poland to organise and run postgraduate program of studies in relaxation techniques.

An interesting study related to the topic of the present article was conducted by Professor Wojciech Pasterniak, who specialises in methodology of teaching and theory of moral education. Among his prolific pedagogical output is an analysis of education by understanding, based on self-knowledge which is "passé" in the contemporary, consumption and pragmatism-oriented societies. From his study investigating how well the subjects knew themselves, carried out between 1997 and 2002 with the participation of 240 university students, emerges the image of an immature student, who idealises himself, ignores or is even blind to his own shortcomings and inner conflicts. According to Professor Pasterniak, self-knowledge, as German educator Gestalt Hilarion P. Petzold put it, may happen in the act of meditation that unifies intellectual, emotional and spiritual intelligence. When practising it and remaining in the state of mindfulness, we may free ourselves from ego, arrogance, false beliefs about ourselves and the world, which results in experiencing wisdom. Since this is possible not in ordinary but in heightened states of awareness, this is the direction in education should head. Contemporary school system uses various forms of violence and focuses on the violent, material and "evil", face of the world, thus depriving students of the possibility to know themselves, to experience freedom and spontaneity, to follow their hearts. In

this way metaphysical dimension and the aspect of moral education are disregarded, which leads to serious crises in the contemporary world. The most important solution to the problem of multi-aspectual crisis of the contemporary world and man are neither political or economic changes nor revolutions, but the transformation of human being that can only happen through self-knowledge. It is the obligation of contemporary education to acquaint its recipients with proven methods of knowing oneself, and relaxation methods, including meditation, perfectly lend themselves to the accomplishment of this goal (Pasterniak, 2003).

I have been conducting my own studies on relaxation in education for over 25 years now. In 2003, I conducted a comparative study on the effects of practising meditation by adepts who vary in the length of practice, of the effects of practising relaxation methods and of the effects of simple rest in lying position. To register the results I used a biofeedback device that measures skin conductance. My aim was to repeat the research of Japanese scientists, who demonstrated that Zen monks, expert in meditation, were not subject to habituation (Kasamatsu & Hirai, 1966). My study showed that those who meditate, experience considerably deeper relaxation than those who just relax, at the same time the subject who had practised meditation regularly for a long time was not subject to habituation during meditation. This subject reacted intensely to stimuli in the form of loud crackling sound every fifteen seconds, and then within just several seconds returned to the state of deep relaxation after each crackling sound. The results were different in case of the subjects who used relaxation techniques and those who rested in lying position. Their reactions to loud crackling sounds soon ceased. Based on that, we can draw conclusion important from the point of view of education. Habitual learning rules referring to the process of habituation that constitutes scientific validation of popular didactic theories, have taken roots in the contemporary school system. However, it turns out that trained persons are not subject to this process, which means that an effective didactic process can be conducted in an entirely different way. In 2005, I conducted a different research project on the possibility of reducing excessive exam stress by using basic and advanced relaxation techniques. Three groups of students, each consisting of 10 persons, took part in the experiment. The results demonstrated that unlike in the group of students who did not undergo relaxation training, the stress level during the exams, measured by biofeedback device, was considerably lower in the group of students who learned basic relaxation techniques. The persons from the group which was taught so called monumental relaxation, an advanced relaxation technique, could additionally reduce stress level at will, e.g. before replying to any of the three examination questions. The experiment demonstrated that by using relaxation, we can considerably reduce the non substantial aspect (frequently manifesting as anxiousness, lack of concentration and memory gaps) in the process of learning and examining, not only at school (Zieliński, 2011).

Currently, research works on stress and relaxation in the process of education in various educational institutions and environments are being carried out at the faculties of pedagogics at Polish universities. I partly quote these results in my book. However, in general it can be said that in Poland the “culture” and knowledge of relaxation is poor not only among the general public but also among teachers and students (Zieliński, 2011).

Conclusion – the presence and role of relaxation in subdisciplines of pedagogics and fields of pedagogical practice

The strongest connection between relaxation and pedagogics can be seen in the pedagogics of health. Great merit in this respect have had M. Demel and L. Kulmatycki already mentioned before. Relaxation methods in the pedagogics of health are primarily associated with stress-fighting techniques. Few people can attain calmness and relax deeply without any training. In contemporary societies and also in schools there are many false beliefs concerning stress, for instance the belief that stress cannot be avoided and thus we are not personally responsible for its occurrence and consequences. However, our health to a large degree depends on our interpretation of what happens to us and our knowledge of stress-fighting techniques. The knowledge of one's own stress reaction pattern, of situations in which it is activated most often, help of parents and teachers as educators in overcoming its negative consequences, as well as the knowledge of basic health strategies constitute absolute minimum to be taught in the process of health education of the contemporary man. Concern for clean air, water, physical activity, relax, balanced diet, favourable psychological atmosphere and self-knowledge are among the factors that join pedagogics of health with ecological pedagogics, physical as well as moral and social education.

There are also clear links between relaxation and the theory of upbringing and the pedeutology as the subdisciplines of pedagogics. In Poland the theory of upbringing is primarily concerned with the issues of upbringing and self-education that is complementary to upbringing (Śliwerski, 2010). Relaxation methods, as has been demonstrated by many scholars such as S. Siek, A. Szyszko-Bohusz and W. Pasterniak, are useful in the process of self-development, in freeing oneself from faults, in developing desirable personality traits and attitudes as well as more and more advanced structure of awareness that aims at manifesting wisdom and so called level of universal conscience rules in everyday life.

Relaxation also plays an important role in didactics. As has been proved by G. Łozanow, H. Teml, J. Gnitecki and other researchers, relaxation methods and relevant techniques such as suggestion or visualisation, considerably intensify the process of teaching and learning. Moreover, there is a possibility of change in the prevailing theories and practices of teaching based on the fact that habituation as a basic mechanism in the process of learning has been questioned.

Relaxation also plays a significant role in special pedagogics and childcare pedagogics. The number of the disabled keeps increasing while their rehabilitation is usually only "technical" and does not involve their internal conflicts, inhibitions and adaptation problems. Various relaxation methods may prove to be useful in view of this ignored aspect of disability (Bielecki, 1994). Orphaned, abandoned and neglected children and teenagers as well as older people in difficult situation also experience similar problems that belong to the domain of social and childcare pedagogics.

Relaxation is also a part of pedagogics of rehabilitation and pedagogy of labour. Socially maladjusted persons undergo an effective rehabilitation based on relaxation methods and systems, which constitutes the subject of research in pedagogics of rehabilitation. The above mentioned research works demonstrate high rehabilitation effectiveness of these methods and systems (Cekiera, 1998). Pedagogy of labour studies the use of relaxation methods in guidance and occupational orientation. The scientist advises

using these methods when working with customers who experience excessive occupational stress, persons at risk of unemployment and the unemployed. It has also been noted that using relaxation methods contributes to the increase in effectiveness and improvement as regards creativity at workplace (Murgatroyd, 2000; Miller, 1981).

Using relaxation methods in both pedagogical practice and theory is usually partial, which means that relaxation constitutes only a part of a bigger picture, e.g. it is an a preliminary stage of speech exercises or an element of kindergarten play or in theory when for example it constitutes a component of theory of didactics. Pedagogics clearly lacks global or comprehensive application of relaxation, e.g. in the form of a separate didactic unit of "relaxation lessons" or in the form of it being one of the main aims of education or a pedagogical method in itself. Such global approach would mean the appreciation of its characteristics and incorporating its benefits in the education process of a contemporary man. Scientific development of relaxation methods including counter indications and safety measures as well as indications, followed by their responsible, complete implementation to the general education system seems to be a proper though still improbable way of enriching this system and providing help in the development of neglected parts of our personality and areas of life of a contemporary man.

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