

Chapter 2

Rehabilitation of Individuals with Visual Impairment in the Czech Republic

Pierre Villey was the first to publish the assertion that even a severe visual impairment does not constitute determination for the development of human personality if optimal special approach is used (Smýkal, 2006). It is clear that the ability to use partial vision offers a significant potential for the preservation of the continuity of development and achievement of acceptable quality of life. However, even in case of individuals with low vision, it is necessary to learn a variety of special strategies which determine the effective use of partial vision or other compensation methods and means. Even in this case, it is not possible to avoid rehabilitation intervention, which is, in any age, inseparably linked with education. Rehabilitation has an enormous significance for:

- Prevention of pathological psychological reactions to the emergence or development of the disorder
- Prevention of social exclusion
- Preserving/regaining subjectively perceived acceptable quality of life
- Prevention of permanent loss of employment and social opportunities

The aim of rehabilitation of individuals with low vision is to adopt the strategies of using the partial vision and special means which as much as possible eliminate the disadvantage caused by the visual disorder.

The current development of rehabilitation has internationally experienced an increasing interest specifically in two perspectives: *the field of quality of life* (especially in connection with the development of education of elderly adults) and *the development of rehabilitation as a comprehensive discipline* (Dickinson, 2002; Hazel, Petre, Armstrong et al., 2000; Hinds, Sinclair, Park et al., 2003; Lueck, 2004; etc.). One of the major transnational activities supporting the above listed trends is the ‘Medicare Low Vision Demonstration Project’ aiming to unify and increase the quality of services of all providing subjects through the professionalization of rehabilitation professionals; to improve the continuity and interconnectedness of medical,

educational and rehabilitative services; and to implement the standardization and evaluation of services.¹

The support mechanism of rehabilitation of adults and elderly adults with visual impairment is in Czech practice built on the system of *educational and rehabilitation programmes*. The basic criterion of modern concept of rehabilitation is a close connection between medical treatment and special education. The importance of lifelong education has increased. Ludíková (2003), Jesenský (2002) as well as other authors further specify the fields of special education of adults with visual impairment (CZ—*andragogika osob se zrakovým postižením*).

The change of paradigm² of education theory brought more than ever before new possibilities and means of adult education as key instruments for the development of citizenship, social cohesion and employment.³ Lifelong education in its widest sense becomes a social phenomenon. This trend can be documented, for example, on the modernization of teaching strategies affected by educational and psychological concepts like Gestalt therapy (Perls), rhetorical approach in therapy (Rogers) and other approaches which appear mainly in the open education and rehabilitation concepts of support applied to the target groups with special needs (Vítková et al. 1999). The modern paradigm of contemporary education theory is based on respect for human rights and human need to continue throughout life with developing personality.⁴

Similarly also special education (including the special education of individuals with visual impairment) found itself in a situation where it was necessary to reflect various differentiation and inclusion processes due to the development of general disciplines. One of the consequences of development is a gradual convergence of the boundaries of competence between general, special and social education. Evidence of this is the development of applied educational disciplines as inclusive education. This new concept builds on the mobilization of human capital and potential in the environment of social change. Ludíková (2005) talks about the importance of *special education of adults* in terms of the access to a wide variety of possibilities of lifelong education focused on *the specific areas of needs* of specific population groups (including individuals with disabilities)—for instance, the accessibility of modern information technologies leading to the improvement of quality of life in adulthood and old age.

¹Within the professionalization of specialists working in this field, it is possible to obtain an ACVREP certificate in three sectors: low vision therapist, orientation and mobility low vision specialist and vision rehabilitation therapist.

²The concept of paradigm (para—beside, deigma—shown) is usually translated as a model, pattern or concept of specific issue. This concept is defined as ‘generally recognized scientific knowledge which, for some time, provides the scientific community with model problems and solutions’ (Howard, 1998, 354).

³Lifelong education is a response to social development. The EU made its development one of the fundamental objectives for 2004–2005, and this trend continues.

⁴According to Ferguson, reflections of changes in the paradigms of education theory can be judged from the comparison of the classical and modern concepts of the paradigmatic foundation of education (Jesenský, 2000, 289–291).

In accordance with the democratic norms of development of society pointing to the inclusion of all individuals into all social activities, the expected development will probably lead to a gradual merging of specialized educational disciplines. In this context, it is necessary to respect the single paradigm. Different specifics will be further determined on the basis of partial paradigms important for the educational needs of various target groups. The examples of general, widely applicable paradigms are *anthropological paradigm*, *paradigm of development of personality* and *paradigm of lifelong effect* (Jesenský, 2000). These comprehensive reforms of the view of the field of special education are fully in line with the value perception of postmodern society as well as the global trend of comprehensive non-excluding approach. Valenta (2001) talks about 'a new concept of the field of special education'.

The focus on rehabilitation leads us to the concentration on a narrower concept of adult education, i.e. to *education and rehabilitation interventions* in adult and older adult population.

Special education of adults has two basic concepts: *The wide concept* is understood in the context of adult education and is based on the development of general education of adults in terms of adapting the programmes and forms of adult education for the groups of individuals with special needs. *The narrow concept* represents the education of specific rehabilitation contents and means. Jesenský (2007) considers the importance of this concept in several specific areas:

- For the development of conditions for follow-up education and training
- Importance for overcoming specific disadvantages
- Importance for promoting inclusion

The narrow concept of special adult education is currently struggling with unsettled terminology and system. In professional literature, we can also come across the terms of treatmental or rehabilitative education (Ludřková & Stoklasová, 2006) or adult education for the handicapped (Jesenský, 2000). Although the reference fields of the above-mentioned disciplines are not exactly identical, it should be noted that they still significantly overlap.⁵ It is not entirely clear in the current state of development in the Czech Republic whether rehabilitation as scientific field takes place in the system of medical or educational disciplines. However, it is clear that education occupies a crucial position in rehabilitation as many rehabilitation tasks must be addressed through education.

2.1 Development of Czech Rehabilitation Interventions in Brief

The beginnings of rehabilitation efforts on the territory of our country can be traced approximately from late eighteenth and early nineteenth centuries, in connection with the foundation of first educational institutions and institutes. At the same time,

⁵Klein (Matuska, 2003, 2) considers the terms 'treatmental education', 'rehabilitation education' and 'special education' in a wider sense synonymous.

first education theories were formed which attempted not only to improve education but also to achieve the independence and employability of individuals with visual impairment.⁶ However, on the whole, this period brought mainly segregation and a high level of dependence on institutional care.

In the early twentieth century, a number of self-help societies started to emerge which sought to achieve an equal position in community for individuals with visual impairment. Their main aim was to claim the right for independent life. This idea became a platform for the development of Czech modern rehabilitation of adults with low vision (Ludíková, 1988).

In the second half of twentieth century, voluntary rehabilitation groups were organized and experimental activities took place regarding the verification of effectiveness of rehabilitation programmes.

An important milestone was the year 1989. The transformation of the country to a democratic type of state also meant a significant release in the systems of care, education and rehabilitation towards more relaxed style (particularly in regard to previously preferred forms of segregation). In the following period, there was a rapid development of non-governmental support organizations. In 1990, the first regional centres for social rehabilitation 'Tyfloservis' started to work. In 1991, 'Středisko výcviku vodících psů' ('Czech Guide Dog School') and 'Pobytové rehabilitační a rekvalifikační středisko Dědina' ('Dědina Residential Rehabilitation and Requalification Centre') in Prague were founded. In 1992 'Středisko pro odstraňování architektonických bariér' ('Centre for the Removal of Architectural Barriers') opened as well as its department for digitalization which later opened a library of braille digital texts (1993) and the www.brailnet.cz server (1996). In the same year, 'Slepecké muzeum' ('The Blind Museum') in Brno was opened to the public. In 1993, 'Oddělení technických pomůcek' ('The Department of Technical Devices') in Prague opened, and a year later also 'Prodejna rehabilitačních pomůcek pro osoby se zrakovým postižením' ('Rehabilitation Aids Shop') with delivery service in Olomouc. At Charles University in Prague, 'Institut rehabilitace zrakově postižených' ('Institute for the Rehabilitation of Individuals with Visual Impairment') was created.

Civic associations have also undergone dynamic development since 1989. 'Společnost nevidomých a slabozrakých' (SNS; 'Society of People, Who Are Blind and Partially-Sighted') separated from the 'totalitarian' organization 'Svaz invalidů' ('The Union of Invalids'). However, different opinions and visions for the formation of rehabilitation and social policy caused a split and another separate organization 'Česká unie slabozrakých a nevidomých' ('Czech Union of Low Vision and Blind') emerged (1989). Both organizations reunited into 'Sjednocená organizace nevidomých a slabozrakých' (Unified Union of Low Vision and Blind—SONS) in 1996.

In the years 1997–2000, the existing rehabilitation services grew to include legal advisory services; a number of short-term rehabilitation stays increased and publishing activities developed. Regional rehabilitation centres were founded, which significantly increased the availability of rehabilitation (Bubeníčková, 2002).

⁶One of the progressive theories of the time was the 'Caring for the Blind from Cradle to Grave' theory stimulating active approach and self-realization (Mužáková, 2004).

After 2000, the organizational structure of rehabilitation services for individuals with low vision was significantly transformed. The SONS founded the first public benefit organizations to ensure systematic rehabilitation services all over the country. The regional system of social rehabilitation centres ‘Tyflo servis’ and ‘Pobytové rehabilitační a rekvalifikační středisko Dědina’ were transformed as well. In the following years, more regional activation and rehabilitation ‘Tyflo centrum’ centres were gradually founded.

After the establishment of democratic system, international documents were also ratified and Czech documents standardizing support for individuals with special needs created. The most important Czech documents are: ‘Národní plán pro snížení negativních důsledků zdravotních postižení’ (‘National Plan for the Reduction of the Negative Effects of Disabilities’, 1993), ‘Národní plán pro vyrovnání příležitostí pro občany se zdravotním postižením’ (‘National Plan for the Equalizing Opportunities for Citizens with Disability’, 1998), ‘Národní plán podpory a integrace občanů se zdravotním postižením na období 2006–2009’ (‘National Plan for the Support and Inclusion of Citizens with Disabilities 2006–2009’) and ‘Národní plán vytváření rovných příležitostí pro osoby se zdravotním postižením na období 2010–2014’ (‘National Plan for the Creation of Equal Opportunities for Individuals with Disabilities 2010–2014’).

In 1999, an interdepartmental group of experts was brought together in ‘Sekce pro rozvoj ucelené rehabilitace České lékařské společnosti J. E. Purkyně’ (‘Comprehensive Rehabilitation Section of the Czech Medical Association of J. E. Purkyně’). Their task was to develop a concept of comprehensive rehabilitation system in the CR and to promote it to public awareness. In the same year, the Government adopted a resolution on the National Employment Plan (2004–2006), which described an interdepartmental concept of rehabilitation and its implementation in practice as a condition for employment of individuals with disability. These efforts culminated in the implementation of the concept of active employment policy in the Employment Law (435/2004 of the Collection). One of the rapidly developing areas relating to this law is the vocational rehabilitation of individuals with visual impairment. The development of regional centres of vocational rehabilitation is covered by the same methodology and provides rehabilitation programmes aimed at the support of employability (Růžicková & Balcarová, 2006). In 2002, the legislative intent of Rehabilitation Law was prepared; however, the bill has not been passed yet (Švestková, 2005). Rehabilitation activities were subsequently included in the Social Law (2006).

2.2 Theoretical Models of Rehabilitation

According to the WHO (2001), rehabilitation is one of the four subsystems of health and social services: *prevention of illnesses; primary and acute care; rehabilitation; and long-term services and support*. Pfeiffer and Jesenský can be considered the pioneers of comprehensive rehabilitation in this country as they were the ones

who attempted to systemize and develop a comprehensive approach in the Czech rehabilitation field.

The term ‘rehabilitation’ was originally understood as the full recovery of damaged function of the organism. The fact that many persons cannot reach full recovery even with optimal treatment and rehabilitation has pointed to the need to respect two different models which can work separately or in a close cooperation:

1. *The medical model* is based on biological and organic or functional causes; leads to medically oriented treatment rehabilitation, the primary objective of which is to overcome the disability. Rehabilitation measures are mostly implemented through counselling, psychological intervention, various supportive educational and therapeutic methods. This model systemically belongs to short-term rehabilitation. It is most often realized directly in hospital environment as well as during spa treatment stays; more recently also by visits to the place of residence.
2. *The special education model* represents mainly the educational, social and occupational component of rehabilitation. Institutional arrangements are inconsistent. The Ministries of Labour and Social Affairs, Education and Health take part in the form of subsidies to the NGO.

Based on these facts, a modern definition of comprehensive rehabilitation was formed which is characterized by the following: generalization, comprehensiveness, coherence and complexity of the concept in terms of type, degree, age and other categories (Jesenský, 2002).

Comprehensive rehabilitation includes timely, continuous and coordinated effort to engage the person as soon as possible in all the usual activities of personal, social or professional life and to achieve the highest possible level of independence. The aim of the concept is secondary prevention of the consequences of illnesses, injuries and congenital defects. In the process of rehabilitation, several basic forms must be used: *medical rehabilitation services, counselling, education, social services, job opportunities* and other forms, all on the basis of coordinated society-wide system (Švestková, 2005).

2.3 Rehabilitation Paradigm

Dynamic changes of the paradigmatic base of special education during the last two decades started the process of modification of the situation in terms of the democratic concept of meeting the needs of individuals with special needs and supporting their options through education and rehabilitation. This reinforced the development of application of educational and rehabilitation strategies, processes and resources. A wide range of previously elaborated perceived phenomena is currently viewed under new, different angles—namely the areas of inclusion, special support, rehabilitation, meaning and function of ‘helping professions’, etc. (Valenta, 2001). The changes were reflected also in the structuring of scientific disciplines, but especially in the structure of institutionalized services; secondarily in the real

possibilities and quality of life of individuals with disabilities. The development of rehabilitation paradigm is thus based on three basic postulates:

- From the attitude of segregation to the inclusion as social norm in the concept of cultural anthropology
- From the one-sided attitude of assimilation of individuals with disability into majority society to addressing issues of the implementation of fundamental rights and freedoms in sense of respect for freedom, independence and mutual enrichment
- From the attitude of importance of rehabilitation primarily for the enrichment of society to the primary benefit of the individual—health and quality of life (Pffeifer, Švestková, & Šťastný, 2006)

The outlined postulates indicate the development of rehabilitation towards an interdisciplinary merging with philosophy of education, education theory, psychology, sociology, law and other, particularly more technically oriented disciplines. Jesenský (2000) structured the rehabilitation paradigm by respecting two criteria: *simultaneous application of multiple paradigms and their dominance depending on the specific characteristics and needs of groups or individuals*.

Dickinson (2002) listed among the main areas of the development of rehabilitation the cooperation of interdisciplinary rehabilitation team, planning and coordination of the means of treatment, systemic education and rehabilitation and requirements for the professionalism of the rehabilitation professional.

The current concept of rehabilitation of individuals with visual impairment finds itself in the stage of search for new terminological definitions and content changes which follow the development of comprehensive rehabilitation system. Whilst some areas of rehabilitation has been currently already developed at the European level, in other areas, services are provided in practice; they are not, however, theoretically and conceptually supported at the level of theory. The basis for an innovation and completion of rehabilitation system are not only the general changes described above, but also changes related to the target group of persons with low vision, primarily the comparison of new and international observations, development of new possibilities and forms of institutionalization, insurance of cooperation between support systems and, last but not least, the use of IT technologies. This reflects back on the need of paradigm shift and change of curriculum as well as means of rehabilitation.

The strategies of the contemporary rehabilitation of adults in the Czech Republic are directed to *the use of all potentials at the level of 'human resources', including self-realization and work*. The development points to the need to strengthen educational and vocational rehabilitation components.⁷

⁷In particular, it is teaching the use of demanding rehabilitation equipment and information systems. The project 'Vzdělávací program pro edukačně-rehabilitační pracovníky tyflopédického typu' ('Educational programme for educational and rehabilitation specialists in vision rehabilitation') was implemented in order to verify the actual educational and rehabilitation needs of indi-

A formation of rehabilitation system is subject to historical, philosophical, medical, educational, social and other variables. On their basis, the specific (internally structured) model of the paradigm of vision rehabilitation is created. The formation of a paradigm is to be based primarily on the following initial postulates:

- It comes from human potential to compensate for lost competences with the help of education.
- It uncovers possibilities for activities in the formation of new identity and quality of life.
- It modifies and brings new means of vision rehabilitation.
- It brings new impulses for the use of communication equipment and rehabilitation technology for individuals with visual impairment.
- It promotes opportunities to improve individual's social status in community and the possibilities of social inclusion.
- It helps to induce a 'healthy' (positive) lifestyle.

The most important paradigm to start with is the adult education paradigm. Jesenský (2007) considers the following paradigms especially important for the target group of individuals with visual impairment: *therapeutic; socializing; legislative support and respect for gender; (eventually other) individual specifics*.

2.4 Conditions and Principles of Rehabilitation Process

Conditions which influence the effectiveness of education and rehabilitation can be viewed from various angles. One of the key ones is the perspective of the individual. This point of view can be defined on the basis of internal and external factors at work. Internal factors include the effects of personal characteristics: anatomy and physiology of the individual; intellect, personality and skills including compensation and rehabilitation capacity; communication skills and their potential for development; socialization skills, personification, accessibility of culture, ability to develop work skills, mental attunement and spirituality. The external factors are phenomena belonging to support mechanism (the level of therapeutic, sociopolitical, material and technical, educational and rehabilitative support).

The above list shows that the potential of educational and rehabilitation intervention is significant but very diverse in terms of disciplines and professions. As to the structuring of specific form of rehabilitation based on the needs of each individual, several important initial criteria can be defined: identifying the aim of rehabilitation; determining expected time frame; choice of forms, methods and techniques; and verification of results (supervision and control).

The principles applied in rehabilitation are based on adult education and are modified by the requirements of special education of individuals with visual impair-

viduals with visual impairment in the CR and to prepare guidelines for the education of rehabilitation specialists (Jesenský, 2007).

ment. It is also necessary to take into account the specifics of *pathology of visual analyser and psychological influences*.

Based on generally valid teaching principles, it is necessary to primarily ensure the consistent application of principles: multisensory approach, systematic approach, linking theory with practice. These principles strengthen individual's motivation as well as support the process of understanding and the use of new knowledge in real life situations (Ludíková, 1989). Rehabilitation approach requires the application of the principles of Jesenský (2000):

- Independence, partnership, facilitation and support (application of humanistic approach)
- Activity and development of legal awareness
- Subsidiarity (favouring the implementation of intervention in the place and at the level of the origin of problem or in the conditions of practical application of the principles)
- Tolerance, empathy and assertiveness
- Inclusion (a supportive means of the experience of belonging to majority society)

Czech principles of rehabilitation, as in other countries, aim at solving a problem at the level of professional team, taking into account the whole personality in the context of quality of life. The forms of 'home care' are being widely developed (Pffeifer, 2005; Culham, Ryan, Jackson et al., 2002).

The major determinant of successful rehabilitation is also the atmosphere of relationship between the individual and rehabilitation team. Especially in the early stages of rehabilitation intervention, the ability of the rehabilitation specialist⁸ to link with the person influences the course, and in some cases also the outcome of the procedure (Ludíková, 1988).

Educational skills are addressed by theories of teaching. In the framework of comprehensive rehabilitation, the theories deal mainly with the personal and professional profile of rehabilitation specialist, standardization of his/her competences and, last but not least, their grading depending on qualification and work position. In terms of theories of teaching in rehabilitation, there are two substantial types of variables:

- Those affecting the quality of rehabilitation interventions (e.g. abilities and skills, qualification and experience)
- Those affecting the opportunities and conditions of rehabilitation specialist (structures of education, the role of the rehabilitation specialist) (Jesenský, 2002)

The process of adult education and rehabilitation is based on therapeutic and facilitating concept. This entails a more frequent use of individual forms of work, visits in homes and closer relationships between the teacher and the individual.⁹

⁸The ability of rehabilitation specialist is determined by both professional and personal competences and level of experience.

⁹It should not turn into the nursing function which supports a rather passive reception of the care by the individual.

Those specifics require compliance with ethical standards in rehabilitation process. Every professional must be aware of the high level of personal responsibility for the impact of his/her behaviour and conduct. Thus the professionalization of rehabilitation brings the requirement of the specification, standardization and obligation of the code of ethics of rehabilitation professionals. Such a document can be adopted from multinational professional organizations.¹⁰ The code of ethics is to guarantee high standards of professional educational and rehabilitation services. It can serve as the means to accept one's own responsibility for the ethical aspect of rehabilitation and to prevent personal failure. In contrast, it constitutes the condition of credibility and professionalization of services.

Jesenský (2002) stated that the increase in professional skills of rehabilitation professionals should proceed in the continuous improvement of professional competences through balanced self-development in three basic areas: continuing education, qualitative growth of personal qualities and skills and efficient use of professional experience. These three components represent the potential for further development, which should be systematic and purposeful, in harmony with the lifelong learning of the rehabilitation specialist.

2.5 The Role of Special Education Approaches

Education theory of adults with visual impairment responds more closely to the current state—personal goals, abilities, experience, interests, social roles and their eventual changes influenced by the development of visual disorder. From this point of view, the education of adults with visual impairment is built on the following paradigms: *autonomy and independence (activation); communication and cooperation; accessibility of adaptive technology; lifelong education; social inclusion; rehabilitation; employment support* (Jesenský, 2002).

The objectives of education of adults with visual impairment are significantly influenced by special needs which are saturated through comprehensive rehabilitation. The most widely used means of education of adults with low vision in the Czech Republic are educational and rehabilitation interventions which are currently most frequently provided in the form of individual outpatient interventions (on a smaller scale in homes). The experience has shown that the most practical way is structuring the specific content of education and rehabilitation into the form of educational and rehabilitation programmes. Through them, the current Czech rehabilitation practice provides support in the wide area of special needs (see Fig. 2.1).

¹⁰ 'Academy for Certification of Vision Rehabilitation and the Education Professionals' organizes a system of binding ethical codes specifying rights and obligations in various areas of rehabilitation (www.acverp.org; cit. 2006-06-25) (2006).

	Education resources	Group of individuals with:
1	Educational needs focused on the use of visual abilities and rehabilitation resources	Low vision
	Low vision training	Central vision acuity
	Visual hygiene and prevention, relaxation	Peripheral vision acuity
	Effective use of rehabilitation aids and techniques	Refractive disorders
	Strategy of rational work with visual materials	Accommodation disorders
	Strategy of an effective use of environment and its modifications	Binocular vision disorders
		Colour vision deficiency
		Depth perception disorders
		CNS disorders
2	Educational needs focused on the use of compensatory functions and resources	Low vision/ Total visual impairment
	Strategy of compensation for insufficient vision by using hearing, effective use of appropriate means, aids and systems	
	Strategy of compensation for vision by using touch, effective use of appropriate means, aids and systems	
	Strategy of compensation for vision by movement, effective use of appropriate means, aids and systems	
	Strategy of compensation for vision by thinking, effective use of logic, concentration, arrangement, etc.	
	Strategy of compensation for vision by smell, effective use of appropriate means	
	Strategy of compensation for vision by taste, effective use of appropriate means	
3	Educational needs focused on personality (using abilities, personal qualities, cultural value orientation)	Low vision/ Total visual impairment
	Strategy of the support of adaptation to VI (strategy of mental hygiene, prevention/management of stress)	
	Strategy of the support of speech and communication	
	Strategy of conflict resolution	
	Strategy of solution of sexual needs and partnership	
	Strategy of the use of emancipation, assertiveness and engagement in community	
	Strategy of increasing employability	
	Strategy of the use of culture, sports, relaxation	
	Strategy of exercising self-realization	
	Strategy of increasing social status – inclusion	
	Strategy of lifelong education	
	Strategy of increasing autonomy	
	Strategy of overcoming information deficit	

Fig. 2.1 The classification of special needs of educational support in terms of the target groups of individuals with visual impairment (According to Jesenský (2002, 28))

2.5.1 *Model of Educational Approach*

The education of adults with visual impairment should respect and, if necessary, include the development of following areas: *value orientation* (needs, interests, ideas, attitudes); *abilities and characteristics* (functional extent of vision loss, cognitive abilities and processes, personal qualities); *special knowledge promoting personal development* (knowledge of visual impairment, limiting factors and ways how to overcome them, etc.); *practical skills and habits* helping to overcome functional loss through rehabilitation and compensatory skills and habits (Jesenský, 2007). Such a curriculum of education is based on the prerequisite of individual's cooperation during the process of rehabilitation in the form of motivation, active cooperation and shared responsibility for personal development (Lueck, 2004).

The basic criteria for the selection of a model of educational approach are: character of target group, specifics and distinctions of experiencing and learning. Jesenský (2002) lists as the basic building blocks: general concept of education, educational demands, atmosphere of the relationship between the special teacher and individual, style of education and support of self-education. Each of these factors affects learning situation and consequently also the resultant effect of education.

1. *The overall concept of education* is built on the postulates of lifelong education, which is a continuous supportive process. It enables persons to acquire knowledge, attitudes, values and skills which they need to meet their needs in all the areas of life. The basic priority of education is the personal benefit of the individual (regardless of age). In rehabilitation, the concept of education must respect *the therapeutic model of learning*, and it must do so in connection with the specifics of the target group. These requirements are best met by *the humanistic model of adult education*, based on the principles of *voluntary cooperation, partnership, non-formal and didactic approach of the teacher and support of independent individual's activity*. According to Slavin (In Palán, 1997), the individual (client) bears the substantial part of responsibility for the effectiveness of educational process in humanistic model. He/she participates in the selection of content, forms, terms of education and partly also influences his/her own particular form of participation in education.

The task of the teacher is primarily to motivate persons to their own activity, perform supervisory activities and help to eliminate errors. The education should be conducted in accordance with the overall development and promotion of culture; at the same time, it should be based on the existing knowledge, skills and experience of the educated person. The education should be based on the use of various experiences and resources which provide the person with the opportunity to make informed decisions and also to assume the risk of their consequences. The aim is to create such learning situations which relate directly to the solutions of specific problems and which are practically applicable for the person in his/her daily living. The purpose of education is the profit of the person—especially extending the possibilities of work and leisure involvement, enhancing adequate

self-esteem and personal satisfaction. The assessment should be based on confirmation of achieved progress, encouragement and strengthening of motivation for further development.

2. *Style of education* is considered an important variable influencing the learning process. It has a significant potential to determine overall learning atmosphere as well as effectiveness of educational process. *Democratic and therapeutic style* is considered the best style for rehabilitative and educational interventions. Democratic approach is the basis for an independent relationship of the therapist and the individual. Therapeutic approach functions as a support and facilitation in case that the person does not use his/her own democratic competences in learning process. Freeman and Randall (1997) considers *co-management* an important factor supporting the effectiveness of learning. It is the ability of the therapist to lead learning process using individual's participation in the management of education. This approach can be summarized into five theses, which need to be taken into account in the process of education: *the ability to give an instruction; the ability to understand the instruction; the ability to take a position on the approach; the opportunity to present the task; and perseverance to finish it*. Creating a positive educational atmosphere needs a positive attitude from both sides; otherwise any cooperation would be problematic. For this purpose, it is suitable to present the basic values and strategies for the creation of atmosphere.
3. *Atmosphere of relationships* shaped in the democratic and therapeutic style of education comes from the principles and values of humanistic approach to learning and represents a significant potential in educational and rehabilitation process. The most important principles and values are as follows:
 - (a) Relationships based on mutual respect, trust and informal approach
 - (b) Communication based on respect for rights, listening, positive attitude and support
 - (c) Support of conative qualities (reliability, respect for rules, persistence, etc.)
 - (d) Personal development (accepting responsibility for one's own development, strengthening self-esteem, etc.)

Both the overall and momentary atmosphere during the learning process is created by the person of teacher.

4. *Level of difficulty of education* should always correspond to the real possibilities of the individual. The preparation of an individual educational plan (based on detailed clinic, functional, special education as well as psychological assessment) and structuring it into educational programmes and training lessons is a responsible task of the therapist. The difficulty of education depends on the objectives set out in cooperation with the individual and depends on many variables (objectives, time allocation, form of education, individual abilities of the individual and possibilities of the teacher). Each educational unit should be constructed so as to achieve the atmosphere of success. The teacher can reach this by using the principles of differentiation of objectives into manageable educational tasks and by respecting the logical order of their sequence.

2.5.2 Principles of Special Education of Individuals with Visual Impairment

Specification of the principles is based on the general principles as well as the special knowledge of: pathology of visual analyser and its functions, specifics of cognitive processes, specifics of experiencing and shaping the personality of individuals with visual impairment as well as specifics of rehabilitation needs and environmental adaptation.

The specific principles of education of individuals with visual impairment were listed by Jesenský (2003):

- Principle of humanity and respect for human dignity
- Principle of respect for special needs due to the complexity of the effects of education¹¹
- Principle of purposefulness in educational processes
- Principle of preventing or minimizing the consequences of visual impairment at the level of disabilities and handicaps
- Principle of a unity of educational and rehabilitative interventions
- Principle of application of the procedures of vision rehabilitation and compensation, technical conditions and services
- Principle of activity and creativity at the level of self-education, independence, assertiveness and emancipation
- Principle of the complementarity of individual and group approaches in education of individuals with visual impairment
- Principle of relaxation during education (to minimize stress, to exercise facilitation)
- Principle of eliminating exclusion and enabling inclusion as part of educational processes (supportive partnership, equality of opportunities)
- Principle of subsidiarity and participation in educational intervention and institutionalization

Růžičková and Vítová (2014) list among the special principles also the early detection of the problem and activation.

2.5.3 Educational Methods and Techniques

Methods of education are another essential part of the resources of special adult education. Palán (1997) gives a general overview of methods: monological, dialogical, problem-based and practical. In terms of education focused on individuals with

¹¹ The basic didactic principles of education, which must be respected, include: principle of awareness and activity; clarity; consistency; adequacy; permanence; linking theory with practice; etc. (Ludíková, 1989).

visual impairment, it is advisable to use all the methods except for monological. Depending on the maximum clarity of content and the resulting effectiveness of education, the use of individual forms of education prevails over the group forms. The character of these two forms allows, and even presupposes, the use of educational methods other than monological. An important determinant of the choice of educational methods is the need to adapt the tools and the didactic and technical means. Jesenský (2002, 61) specified other methods suitable for the education of individuals with visual impairment: method of imitating examples; method of personal involvement and participation; method of animation; method of alternating activity and relaxation; method of elaborated presentation; method of demonstration and facilitation; method of programmatic education; method of the use of training simulator and method of simulation of situations.

Techniques suitable for education of adults with visual impairment, similarly as the listed methods, require particular specifics. Yet there is a very long list of usable or suitable techniques available. An overview is provided for instance in Růžicková (2015).¹² Some of the techniques suitable for education and rehabilitation of adults with visual impairment are: technique of meditation, technique of relief and relaxation; technique of recreation and return to physical fitness; technique of persuasion; technique of superlearning; technique of application of humour and comic relief.

2.5.4 Process and Forms of Education

Special education of adults with low vision is most commonly associated with the provision of specific information and skills. This is done mainly through the implementation of educational and rehabilitation programmes, which take place through individual visits in rehabilitation centres (outpatient form) or in the individual's place of residence.¹³

The strategy of rehabilitation intervention builds on a gradual movement from individual and group forms to self-education forms.¹⁴ The aim of this strategy is to equip the individual with abilities which contribute to professional, independent and responsible solutions to further educational and other situations. Besides its obvious advantage, self-education has also some risks: without supervision, there is a danger of developing habits of using inefficient or incorrect solutions or erroneous findings. The individual might be mistaken about the level of his/her effectiveness without confronting it with other persons. Self-education does not allow for the use of

¹²An overview of educational techniques of adult with low vision is given in the book 'Andragogika a gerontagogika handicapovaných' (Jesenský, 2002).

¹³With the exception of training courses and other types of postgraduate education.

¹⁴Self-education is a very frequent phenomenon in the special education of adults with visual impairment. According to Jesenský (2002, 16), it represents the predominant part of it.

enriching ideas and experience of other persons (teacher / therapist). Moreover, it can result in segregation of the individual. For these reasons, it is advisable to complement self-education with the forms of group and individual education.¹⁵

2.6 The Role of Age Factor in Education

Adulthood is to be assessed in two dimensions: *biological and psychological*. Psychological dimension is further differentiated into the assessment of *emotional, intellectual and social maturity*. However, psychological development does not end with adulthood. It continues to be affected by external influences and experiencing (e.g. education, social environment, type of employment, personal and social life, conditions, etc.). An important factor is the fact that an adult can actively participate in his/her own psychological development.

On the basis of the unwritten norms of democratic society, an adult person should be autonomous and independent. Some individuals cannot reach mental maturity at all in some areas of their life. The reason can be both internal and external factors. Serious visual impairments also belong to risk factors. According to Hartl (1999), this condition is always closely linked to the process of education.

Vášek (1994) describes three types of anomalous development in terms of special education: *interrupted, stalled, belated development*. In adults and elderly adults after an accident or some suddenly emerging progressive and irreversible diseases, a specific mode of interrupted development can appear—reverse development. Reverse development is characterized by temporary return to previous stages of development (Jesenský, 2000).

The classification of the target groups of education of individuals with visual impairment is based on the classifications used in general adult education; we consider as preferable the benevolent classifications which preserve space for individual variations in development. In terms of educational and rehabilitative interventions, it is necessary to assume the risk of delay in psychological development as well as some developmental anomalies. The education and rehabilitation of individuals with more severe visual impairment must be based on reality: a high percentage of adults and elderly with this particular impairment find themselves in a state of reduced activities (Hinds et al., 2003; Galvas, 1998; Moravcová, 2004; etc.). Long experience has shown not negligible deviations in the development of individuals with visual impairment compared to the population without impairment, especially in the area of social skills and personal responsibility. Such a delay is most often described in individuals with congenital disorders in adolescence. A solution to such a finding is the extension of the effects of selected educational interventions until early adulthood. The logical consequence of such a delay is that

¹⁵ In the Czech low vision rehabilitation system, the supervision of self-education of adults with low vision is performed by the Tyflocentrum o.p.s. centres or other non-profit organizations.

this specific target group deals later with some competences characteristic for adulthood (Botošová, 2002, Konvičková and Galvas, 2002).

Manifestations of old age may occur sooner in individuals with acquired visual impairment. Because of it, also the tasks of education of the elderly may need to be implemented earlier than in general population (Galvas, 2002; Moravcová, 2004).

These specifics and risks of deviations from the development of population without visual impairment lead to closer links between the special education of adults with visual impairment and the special education of the elderly. The means and specifics of both disciplines can individually find application in various age groups across the range of adulthood.¹⁶

2.6.1 Specific Educational Approaches to Older Adults

Ageing is a life-long process, the involution manifestations of which may become more apparent at the turn of the fourth and fifth decades of life. Everyone desires to live through old age in a meaningful, fulfilled way. The international priority in building social arrangements for senior population is respect for human rights, which is projected into active and equal attitude to old age.¹⁷ The significance of the education of the elderly is generally seen particularly in promoting rethinking and finding new life perspectives and values as well as active post-productive life (including the support of autonomy and independence) and in the prevention of pathological aging. In this context, elderly education is presented in a wider sense as an empirical discipline providing comprehensive care, assistance and support to elderly population through meeting their needs in other than medically conceived dimensions, but simultaneously with them¹⁸ (Mühlpachr, 2004).

Mühlpachr (2004) formulated four basic functions of elderly education: *preventive*, *anticipatory* (readiness to changed lifestyle), *rehabilitative* (restoring and maintaining

¹⁶The secondary symptoms of acquired visual impairment may indicate the need of approaches of the education of the elderly even at a younger age, or, in contrast, adult education approaches may be adequate for an elderly person. It is always necessary to consider the prerequisites and lifestyle of each individual and not to succumb to the risk of overgeneralization.

¹⁷On the basis of more general multinational documents, the Catholic University of Leuven and the Centre for Life Long Learning at the Free University of Brussels prepared the document 'Charter of Rights And Freedoms of the Elderly', which reassesses the role and position of this age group in society (Mühlpachr, 2004). The fundamental concept of development of the education of older adults, prepared by the UNESCO as a part of the 10-year Action Programme (1997), lists among others also the following strategies: to provide older adults an access to all the educational services available in adult education; to develop the forms of education enabling older adults to actively participate in the life of society.

¹⁸According to the Czech National Programme of Preparation for Aging 2003–2007, the state-supported priorities are: securing conditions and supporting living in natural social environment; maintaining an optimal level of independence; maintaining an active approach of the elderly to education and participation in the life of majority society (Czech Ministry of Labour and Social Affairs (MPSV) No 485; <http://www.mpsv.cz>, Retrieved 29. 3. 2006).

strength) and *strengthening* (support in maintaining interests, activities, culture and autonomy).

An important factor affecting the quality of human life is health. An emergence or progression of visual disorders increases the risk of developing pathological ageing.¹⁹ Similarly as adults, also older adults with visual impairment are characterized by a high level of heterogeneity in the potential of further development, including educational and rehabilitation needs. The specific objectives of the education of older adults include:

- Preventing the loss of social status (social roles)
- Prevention of senescence (pathological aging)
- Slowing the loss of abilities because of disabilities, in many cases premature
- Prevention of the loss of autonomy and participation in social life, etc

The concept of special education of older adults with visual impairment (CZ—gerontagogika osob se zrakovým postižením) envisages a possibility of the participation of older adults in most projects for adults. However, the projects must be, if necessary, individualized to a certain extent and reduced according to individual differences and needs associated with age.

From the perspective of educational process, it is necessary to respect the characteristic specifics which may influence experiencing as well as mental and physical performance. In older adults, a range of these effects can be diagnosed and consequently influenced:

1. *Somatic aspects* influence the overall performance through pain, limitation of functions and their negative impact on mental experience. In terms of visual performance, there is a further decrease in function; complications may occur more frequently due to degenerative changes (presbyopia, glaucoma, ARMD, etc.). Similarly, there is also reduction in the function of other senses, the most important of which are hearing and touch.
2. *Psychological aspects* operate through changes in intellectual performance (loss of memory, intellect, concentration, creativity, etc.) and the way of experiencing. Characteristic symptoms of mental aging are, among others, slowing down pace, impaired ability of communication, reduced tolerance for change, level of activity and the reflection of these in the change of lifestyle (Bragdon & Gamon, 2002).
3. *Social aspects* can strongly influence human performance in a *positive direction* (by the support of social environment, participation, delegating responsibility, etc.) or a *negative direction* (by underestimating abilities, degradation of social roles, etc.).

Starting from the statistically documented premise that older adults *constitute the majority of individuals with visual impairment*, it is necessary to further develop

¹⁹The extreme form is an existential crisis which, without professional help, can result in the loss of meaning of life (Galvas, 1998).

the contents, procedures and programmes focused on this particular target group (Healthy Vision 2012, WHO).

Jesenský (2002) considers as essential for this age group the following approaches: *somatic, pathological and health approach; humanistic, rehabilitation approach; legislative and supportive approach; technological, rehabilitative and compensation approach; social and institutional approach; and paradigm of the specifics of quality of life*. Like in the previous case, this paradigm is considered superior to others.

A key aspect for the creation of individual rehabilitation intervention or programme is the assessment of basic factors, which helps determine the level of specific approaches of adult education. These factors include: degree of visual impairment; time of origin; mental and physical condition (the adaptation to visual impairment; abilities, skills and qualities; level of motivation and activity; any other illness or disability); previous way of life (profession, interests, lifestyle, etc.); sociocultural environment and other potential life circumstances. Taking into account individual differences in needs and performance, we can define priorities in educational principles in terms of the specifics of involution processes in combination with visual impairment.

Compared to the principles of special education of individuals with visual impairment, priority principles are: humanity and human dignity; respecting the needs; well-being, balance, rationality and stress prevention; plurality and complexity of approaches; purposeful action; supportive activity and independence (Mayring, 2004). When selecting educational resources, it is necessary to exclude methods and techniques with a high rate of claim to absorb large amounts of new information (especially technical) and responsibly handle the means and forms which can significantly influence the established lifestyle of the individual (Mühlpachr, 2004).

Major reforms in the view of special education in the Czech Republic during the past 20 years are fully in line with the value perception of post-modern society and the global trend of holistic inclusive approach. Valenta (2001) discusses them in terms of 'the birth of new concept of the whole field of special education'. An intervention respecting the laws of special education in the target groups of adults and older persons represents another important variable to achieve a positive outcome of rehabilitation.

2.7 Rehabilitation Programmes

The character of rehabilitation is also specified through *the form of implementation*. The adult population in the Czech Republic is provided with rehabilitation care through a system of rehabilitation programmes which preserve the element of relative independence; it is also possible to compose them into a comprehensive system according to the individual needs of each person. Rehabilitation programmes allow the existence of a specific offer of rehabilitation services and standardize their

quality. The indisputable advantage of this form of systemization of rehabilitation programmes is the variability of combinations. Their application corresponds to the high diversity of needs of the target group. This form also allows a progressive gradation of individual's performance.

Generally, we can talk about the accessibility of two types of rehabilitation programmes:

General—suitable for most persons with disability

Special—focusing on the special needs of target groups (according to age, type and degree of visual disorder, or other additional criteria).

Based on the areas critical for the quality of life of individuals with visual impairment, Jesenský (2003) classified rehabilitation programmes into three structures²⁰:

1. *Educational and rehabilitation programmes* which include particularly the development of functional literacy and recovery of well-being. They are in a close relationship to primary rehabilitation and are implemented mostly through social rehabilitation.
2. *Programmes for formation of personality and social inclusion* which pursue continuous follow-up in school as well as extracurricular education for individuals with congenital or early acquired disorder and special support in recovery or search for a new identity for individuals with acquired disability. The basic aims are the inclusion and adaptation to specific minority culture.
3. *Programmes for the development of skills and work experience*²¹ which are focused on meeting the needs of economic independence and increase in material standard of living. In most cases, this is linked to the achievement of employment ability.

In terms of organization, the programmes are relatively independent educational units with their own objectives, tasks and content, time parameters, pedagogy and teaching strategies as well as rules of interventions. Adult rehabilitation process is seen as completed after a certain period. On the basis of abilities and personal objectives of each individual, the graduation of performance is required in all programmes.

Basic (elementary) rehabilitation—this is the first stage, with the task of achieving skills in basic rehabilitation programmes at the degree of mastering specific abilities, skills and habits *at minimum level*. At this stage, participation is not expected in vocational rehabilitation programmes (although in individual cases it is not totally excluded).

Developed rehabilitation—supports the deepening of abilities, skills and habits, followed by vocational rehabilitation component. The end of this phase should reach the *standard level* of abilities, skills and habits which are the subject of basic rehabilitation.

²⁰ The overall elaboration of the topic is given in Jesenský (2000, 183–220).

²¹ The programmes on the development of training and work experience represent an important part of vocational rehabilitation; currently, they are at the stage of rapid development (Jesenský, 2000, 2002; vocational rehabilitation projects—SONS, 2004, 2005, 2006).

Highly developed rehabilitation—continues to deepen skills in all programmes *at maximum level*. It consists mainly in mastering skills in unusual and extreme situations and conditions.

A purposeful educational intervention is directed to the personality in terms of the use of ‘human resources’ including the level of professional training and use of other options for social opportunities and self-realization (Fig. 3.1) (Jesenský, 2007).

2.8 The Role of Assistive Devices and Technology

Technological means occupy an important position in the rehabilitation of adults and elderly adults. The current technologically based world offers a variety of possibilities for using special prosthetic, rehabilitation, communication, education aids and technologies. Their systems can be effectively used as a means to support opportunities and to develop personality. An inappropriate (unadjusted) environment, absence of devices, systems or procedures is one of the most common causes of reduced performance (Mayring, 2004). The concentration of the public as well as individuals with visual impairment on the possibilities of modern technology brings problems which need to be addressed in the context of special education and rehabilitation:

- A high demand on control, orientation, intellect, memory and quantity of training. Depending on these variables, the target group of suitable candidates capable of operating the equipment significantly narrows.
- A high demand on work performance is a general trend. A similar performance is also expected from individuals with disability. The use of sophisticated equipment and environmental adaptations enables increase in work performance.
- Excessive amount of time spent on using IT technology as well as over-reliance on technical means causes the risk of neglecting activation of other areas of development of gaining diverse experience and ultimately of developing rehabilitation and compensatory abilities and skills.²²

For the target group of adults with visual impairment, rehabilitation technology is essential. Whilst it is natural for all individuals with low vision to use their partial vision and therefore also technologies providing access to visual information, it is often necessary to alternate during the day visually demanding activities with those less demanding (or by alternative senses). Its main objectives are especially environmental adaptation and development of assistive tools to increase the rate of using

²² Experience shows the need to prevent the risk of favouring unilateral lifestyle resulting from an excessive use of computer technology at the expense of movement and the acquisition of social, communication and other skills dependent on an active, varied way of life (Galvas, 2002, etc.).

partial sight and to achieve visual comfort. This is why substitution means and technologies are also of interest to the field of vision rehabilitation.²³

The current development of society is moving towards technologically more demanding rehabilitation devices, and it is mostly adults who must be trained in their use. Modern technologies come to the forefront in the Czech Republic as they represent an important means enabling return to the original competences. In many cases, the skill of an effective use of technical means and technologies becomes a direct educational goal.

Special education and rehabilitation approaches seek to ensure a balance between the use of rehabilitation technology and the overall development of personality. Jesenský (2002) warns against the risk of overestimating the possibilities of technology at the expense of educational, psychological and other means as well as acquiring of diverse experience.

References

- Botošová, M. (2002). Sexuální výchova a zrakově postižení. In *Edukace a rehabilitace zrakově postižených na prahu nového milénia* (pp. 77–79). Hradec Králové: Gaudeamus.
- Bragdon, A., & Gamon, D. (2002). *Nedovolte mozku stárnout*. Praha: Portál.
- Bubeníčková, H. (2002). Význam informačních a komunikačních technologií v edukačním a rehabilitačním procesu zrakově postižených. In *Edukace a rehabilitace zrakově postižených na prahu nového milénia* (pp. 222–236). Hradec Králové: Gaudeamus.
- Certified Low Vision Therapist. Academy for Certification of Vision Rehabilitation and Education Professionals (ACVERP)* [online]. (2006). Public 2004 [cit. 2006-06-25]. www.acverp.org
- Culham, L. E., Ryan, B., Jackson, A. J., Hill, A. R., Jones, B., Miles, C., et al. (2002). Low vision services for vision rehabilitation in the United Kingdom. *British Journal of Ophthalmology*, 86, 743–747.
- Czech Ministry of Labour and Social Affairs (MPSV) No 485. Public 2007 [cit. 2010-2-22]. www.mpsv.cz
- Dickinson, C. H. (2002). *Low vision: Principles and practice*. Oxford: Butterworth-Heinemann.
- Freeman, P. B., & Randall, T. J. (1997). *The art and practise of low vision*. Oxford: Butterworth-Heinemann.
- Galvas, Z. (1998). Vztahy mezi instruktorem a klientem v procesu sociální rehabilitace osob s těžkým zrakovým postižením. *Tyflologické listy*, 1–2, 23–27.
- Galvas, Z. (2002). *Nácvik sociálních dovedností u dospělých zrakově postižených osob*. Praha: Univerzita Karlova.
- Hartl, P. (1999). *Kompéndium pedagogické psychologie dospělých*. Praha: Karolinum.
- Hazel, C. A., Petre, K. L., Armstrong, R. A., Benson, M. T., Frost, N. A. (2000). Visual function and subjective quality of life compared in subject with acquired macular disease. *Investigative Ophthalmology and Visual Science*, 41, 1309–1315.
- Healthy Vision 2012 (on-line) (2012). <http://www.cdc.gov/visionhealth/research/index.html>.
- Hinds, A., Sinclair, A., Park, J., Suttie, A., Paterson, H., & Macdonald, M. (2003). Impact of an interdisciplinary low vision service on the quality of life of low vision patients. *British Journal of Ophthalmology*, 87, 1391–1396.

²³ Specific tasks of rehabilitation technologies in connection with vision rehabilitation in the CR were addressed by Jesenský (2007, 2002), Bubeníčková (2002), Macháček (2002), Pavlíčková and Vorlíčková (2002), Moravcová (2004), etc.

- Howard, P. J. (1998). *Příručka pro uživatele mozku*. Praha: Portál.
- Jesenský, J. (2000). *Andragogika a gerontagogika handicapovaných*. Praha: Karolinum.
- Jesenský, J. (2002). *Přehled systému komprehenzivní tyflopédie*. Hradec Králové: Gaudeamus.
- Jesenský, J. (2003). *Kategorie komprehenzivní tyflopédie*. Hradec Králové: Gaudeamus.
- Jesenský, J. (2007). *Rehabilitace osob se zrakovým postižením*. Praha: UJAK.
- Konvičková, K., & Galvas, Z. (2002). Prevence sociálně patologických jevů na středních školách pro zrakově postižené. In J. Jesenský (Ed.), *Edukace a rehabilitace zrakově postižených na prahu nového milénia* (pp. 64–68). Hradec Králové: Gaudeamus.
- Ludíková, L. (1988). *Tyflopédie I*. Olomouc: UP.
- Ludíková, L. (1989). *Tyflopédie II*. UP: Olomouc.
- Ludíková, L. (2003). Integrace žáků se zrakovým postižením. In M. Valenta (Ed.), *Přehled speciální pedagogiky a školská integrace* (pp. 179–204). Olomouc: UP.
- Ludíková, L. (2005). *Kombinované vady*. Olomouc: UP.
- Ludíková, L., & Stoklasová, V. (2006). Vysokoškolská příprava v oblasti tyfloandragogiky. In *Nové trendy v edukácii a starostlivosti o zrakovo postihnutých* (pp. 166–172). Bratislava: Vega.
- Lueck, A. H. (2004). *Functional vision: A practitioner's guide to evaluation and intervention*. New York, NY: American foundation for the blind.
- Macháček, P. (2002). *Osvětlení a slabozrakost*. Praha: Tyfloservis.
- Matuška, O. (2003). Ešte raz o liečebnej pedagogike. *Efeta – Otvor sa*, 13, 2–8.
- Mayring, A. (2004). Die Notwendigkeit neuer Rehabilitationskonzepte für Menschen mit altersbedingter Low Vision im Fokus einer zunehmender älteren Gesellschaft. In 2. *Interdisziplinärer Low Vision- Kongress* (pp. 45–52). Würzburg: Spurbuchverlag.
- Moravcová, D. (2004). *Zraková terapie slabozrakých a pacientů s nízkým vize*. Praha: Triton.
- Mühlpachr, P. (2004). *Gerontopedagogika*. Brno: MU.
- Mužáková, M. (2004). *Aspekty integrace lidí se zrakovým postižením v zrcadle historie spolkové činnosti: Rigorózní práce*. Praha: UK.
- Palán, Z. (1997). *Výkladový slovník vzdělávání dospělých*. Praha: DAHA.
- Pavličková, N., & Vorlíčková, H. (2002). Zkušenosti s předpisem optických pomůcek u zrakově postižených. In J. Jesenský (Ed.), *Edukace a rehabilitace zrakově postižených na prahu nového milénia* (pp. 45–49). Hradec Králové: Gaudeamus.
- Pfeiffer, J. (2005). Význam spojení léčebných a pracovních prostředků v rehabilitaci. In: *Rehabilitace a pracovní a sociální integrace osob se zdravotním postižením* (pp. 34–37). Praha: SPURP.
- Pfeiffer, J., Švestková, O., & Šťastný, J. (2006). *Reedukace a speciální pedagogika v rehabilitaci: 4. ročník odborného semináře Rehabilitace*. Praha
- Růžicková, K. (2015). *Rehabilitace zraku slabozrakých a rozvíjení čtenářské výkonnosti*. Hradec Králové: Gaudeamus.
- Růžicková, K., & Balcarová, D. (2006). Pracovní rehabilitace v regionu královéhradeckého kraje v kontextu perspektivy pracovního uplatnění osob se zrakovým postižením na trhu práce. In *IV. mezinárodní konference k problematice osob se specifickými potřebami* (pp. 89–97). Olomouc: UP.
- Růžicková, K., & Vítová, J. (2014). *Vybrané kapitoly z tyflopédie a surdopedie nejen pro speciální pedagogy*. Hradec Králové: Gaudeamus.
- Smýkal, J. (2006). *Tyfpedický lexikon jmenný*. Brno: Technické muzeum v Brně.
- Social law 108/2006 [online]. (2006). Public 2006 [cit. 2012-06-25]. http://www.mpsv.cz/files/clanky/13640/108_2006_2015.pdf.
- Švestková, O. (2005). Návrh koncepce zákona o rehabilitaci. In *Rehabilitace a pracovní a sociální integrace osob se zdravotním postižením* (pp. 17–21). Praha: SPURP.
- Valenta, M. (2001). Krátké zamyšlení nad nutností změny paradigmatu české speciální pedagogiky pro jednadvacáté století. *Speciální pedagogika*, 11, 1–13.
- Vašek, Š. (1994). *Speciální pedagogika: terminologický a výkladový slovník*. Bratislava: SPN.
- Vítková, M., Řehůřek, J., Květoňová-Švecová, L., Madlener, I. (1999). Možnosti reedukace zraku při kombinovaném postižení. Brno: Paido.
- World Health Organization [on-line] (2001). [cit. 2. 3. 2013]. www.who.int/mediacentre/news/releases/2003/pr73/en/print.html.

Reading Rehabilitation for Individuals with Low Vision
Research and Practice in the Czech Republic

Růžicková, K.

2016, XVII, 290 p. 83 illus., 26 illus. in color., Hardcover

ISBN: 978-3-319-43652-4