Assessing the degree of special educational needs of pupils and students with a disability with the use of International Classification of Functioning, Disability and Health

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Abstract

The education systems of most (European) countries reflect health impairment of children, pupils and students in term „special educational needs“. This term differs in content in different countries. Mostly it reflects effect of the „cause“ or „handicap“ onto the conditions of education. This text intends to introduce a model of application of the International Classification of Functioning, Disability and Health, which was brought to the Czech legislation and education by a team of specialists from Universities, public service and counselling institutions.

The core of it is to focus on children, pupils and students with health impairment (it does not solve therefore question of special educational needs of children with social handicap) and also the fact, that the methodology of ICF operates and solves four-level degree (profundity) of these special educational needs. These quoted levels logically match with relevant degree of special needs support pupil or child should or must get. The paper attempts to introduce mechanism of assessing the degree of special educational needs including software possibilities to enter the records gained in the process of diagnostics. The whole system was verified in 2011.

Key words: special educational needs, special needs diagnostics, education, child, pupil, student, health impairment, counselling advisor (worker).

Introduction

Special needs diagnosing and counselling comprises the significant part of the work of education counselling centres intended for children, pupils and students with disabilities (further also pupils with disabilities) and their specific needs. There is over 120 Special Needs Educational Counselling Centres (further also SENCC) in the Czech Republic, that provide counselling and diagnostic services to the group of pupils with impairment. The outcomes of their work serve pupils, their legal representative, to schools and other public institutions. SECC’s declare to tens of situations, which are connected to special educational needs of a concrete pupils and they do influence pupils’ educational opportunities in a significant manner.

The Education law sets down principals of the equal approach in education and education services. The basic condition is the territorial accessibility of Special Educational Counselling Centres’ services in combination with the content readiness to provide complex and high-quality service to a pupil with a specific kind (degree) of disability. Fulfilling the equal approach also means to guarantee the right for unanimous, objective, standard and therefore also comparable assessment of special educational needs (further also SEN) of each pupil in any part of the Czech Republic. From the point of view of the equality of pupils this law has a great importance for the public administration body and its individual levels (Ministry of
Education, County, Municipality), which have legally set scope of authority to establish conditions for fulfilling the special education needs of pupils.

Government of the Czech Republic set by its Decree to the Ministry of Education to:¹

• **Newly define ways of providing special needs support** to children, pupils and students with disability depending on profundity and seriousness of specific disability and the impact on the educational conditions of an individual

• **Improve quality** of organisation, procedural and content frame of special needs diagnostic with the **goal to guarantee independent and unanimous assessment of supportive/supporting measures of children, pupils and students with health impairment in the Czech Republic.**

For this reason the author of the text has in 2012 submitted to the Ministry of Education of the Czech Republic the project „Innovation of the work of Special Needs Centres in the process of accessing special educational needs of children, pupils and students with disability in the Czech Republic“.

The project was accepted and in commission of the Palacky University Olomouc there are several experts working on setting a comprehensive diagnostic „manual“ aimed at finding degree (profundity) of special educational needs of children with intellectual disability, physical, visual, hearing impairment, of children with autistic spectrum disorder and communication disorders. Within this text the results of interim new diagnostic manual are submitted. This manual applies diction of International Classification of Functioning, Disability and Health into the area of education of children with disability.

The specialized (professional) part of the text could be realized due to the support of the Grant Agency of the Czech Republic within the project „Educational Condition of children with special educational needs“ (No.: 406/08/0386).

1) **The Basis goals of the new model of accessing SEN**

The requirement of standardisation is logical, not only in the current time that is accompanied by limited budget and restructuring of expenses in the Czech Republic as well as most countries in European Union.

Standardisation does not mean denial of individuality. Each counselling centre, each counsellor in the centre has – in the submitted system - enough opportunities to use his/her professional potential and experience, founded on principal methodology of accessing the degree of SEN.

If we would like to think about empowering the role of SNECC´ in fulfilling SEN of children with disability, about empowering their function of essential guide through the education process of the specified group of pupils, than it is necessary to be conscious of the fact, that standardisation is for the work of centres indispensable. Without standardisation it is not possible to meet the obligatory requirements for/of quality of the SENCC´ outcomes. In fact following principals of work of SNECC´ and fulfilling these principals, eventually their development, is basically impossible without necessary (procedural/ diagnostic) standardisation:

¹ National plan for creating equal opportunities for persons with disability for years 2010–2014. Government Decree of the CR No. 253 from 29th March 2010
• **Non-discriminating, impartial and equal approach** – essential and logical requirement arising from multilayer character of counselling situations as well as diversity of clients. This requirement is anchored in general principles (i.e. Education Law); however the current system does not have rules (safeguards) guarantying their implicit fulfilment

• **Expertness and quality** – is to be guaranteed in manner and extent that meets the requirement of the current knowledge of participating scientific disciplines on one side and possibilities of the society on the other. Fulfilling this principle means among others also system of qualification, accreditation and certification rules that ought to be stated and abided within all SENCC’s. Again this is impossible to be guaranteed without standardisation of the work of SENCC’s.

• **Efficiency and accessibility** – efficiency shall be understood not only as territorial (nowadays insufficient) compliance of the SENCC’s services, but such a treatment of the outcomes, that would proof effective – as from the point of view of financial demands as from the point of view fulfilling the SEN of child, pupil or students during educational process. Enforceability of the conclusions (results) of special needs diagnostics is in current system very little.

• **Impartiality and independence** – standardisation would allow to increase the prestige of the work of SENCC, creates conditions for assessing the degree of SEN – not taking any wishes, recommendations or intervention of participated subjects into account. High-quality methodology (standardisation) of the work protects SENCC’s and their workers against unwarranted requirements and interference of other subjects.

• **Economy** – only the system having inner coherence, undifferentiated methodology completed by transparent and standardized outcomes can guarantee the public expenses used on financing the work of SENCC to be spent to the maximum on the needs of users and also exclude pointless spending (doubled examinations, diagnosis and advices that nobody respects or applies in practice etc.).

• **Continuity and cooperation** – migration of citizens in the society increases, and also changeover of the clients to centres in different territory. Standardisation of assessment of SEN allows better cooperation and follow-up care of counselling centres. It also may mean (in the future) more effective use of the services e.g. when defying possibilities (rate) of working potential of clients etc.

• **Development and quality - only** set and generally used methodology guarantees prerequisite for further modification and quality improvement of this segment of SENCC. From the state-wide point of view it is not possible to develop a system that has not got defined basic terms of work (normatives, comparability and transparency). E.g. long-term discussed problem of institution of appeal (revision institute) that is closely related to the unanimous methodology of assessing SEN.

2) **Catalogues of assessment of degree of SEN and International Classification of Functioning, Disability and Health**

The crucial goal of the above specified catalogues is to implement four-stage stratification (relevant to classification, which are newly used in health care and social services) divide into area of special education. In contradistinction to health care and social services, where it is oriented on quantification of functioning and disability or degree of necessary support, in – our special needs education are – it means quantification of SEN of children, pupils and students with disability as an essential base for stating degree of special education support (supporting measures). This process is going to complete the compatibility of new approaches
towards clients in three most interconnected and cooperating professions – education, social services and health care.

Since July new International Classification of Functioning and Disability and Health (ICF) came into force 2010, in health care it is obligatory not only for rehabilitation doctor, general practitioner as well as for assessing doctors, but for other members of multidisciplinary teams, that provide care to persons with disability including therapists, psychologists, special needs teachers and social workers.

ICF is intended to measure health disability on individual and population level: Classification of ICF is intended to evaluate degree of disability, assessing health capacity for working ability (if the individual proves disabled), assessing of special needs in education, prescribing and claiming expenses of health devices for the use of health insurance companies….Every practitioner (health institution) is obliged to use The ICF if they find a health state (diagnose) with a certain degree of disability with long-term or permanent character. Relevant classification codes according to ICF must be mentioned in health documentary materials of a patient and in the same time it must be a part of medical report when leaving the health institution in case of all patients who are disabled.2

„Added Value“ of the application of ICF in the Czech health system consists in fact, that professionals in other areas of care (most of all social workers, special needs teachers and psychologists) will gain information relevant to their profession (field of social care and „special“ education), which are otherwise not possible to deduce from diagnosis stated by ICD -10 (e.g. F84.0 children autism provides very pure evidence about functioning of a client, his/her disability, ev. educability). The next positive of the classification is the possibility to follow the development of disability in time – efficiency of intervention, progress or regression can be seen very clearly. The fact, that ICF improves the passability of patients – in case of client who changes from clinic A to clinic B it is unnecessary to undergo further diagnostic aimed on his/her functioning abilities, is not less important.

Independently and parallel to ICF another international classification (AAIDD) - the SIS – Supports Intensity Scale is being implemented in the Czech Republic in the Social sphere. The scale is focused on setting and classifying the degree of support and on conducting a survey of needs of the users of social services in the process of individual planning, that all referring to Law on Social services and corresponding standards of quality. This classification is aimed mainly at clients with intellectual disability and ASD, possibly cerebral palsy and other users of services over 16 (SIS for children is in process)The scale serves mainly as a diagnostic instrument for assessing degree of necessary support (an thus also a financial demands of provided care) and for individual planning.

At the present the Czech Republic faces the phenomenon of implementation of three structural-functioning quantifications (ICF, SIS, and Catalogues of SNECC) in three cooperating areas of care for clients with disability – health care, social services and education.

The catalogues for assessing the degree of SEN attempt to find certain compatibility among both of the systems – mainly they extract domains of components and also applications of ICF. It is possible to state confluence and differences of all three compared systems – ICF, Catalogues for assessing degree of SEN and SIS as they are described by Valenta (2012):

2 Deliverance of the Czech statistical office No. 431/2009 Coll. It is a generally binding document acting as legal regulation.
Similar stratification of diagnostic outcomes into four-level scale according to loss (ICF, SENCC) or a degree of necessary support (SIS). Formally there exists seven-level classification scale in this ICF, but in the view of the fact that the level 0 quantifies no or insignificant problem and levels 8 and 9 mean non-specific problem or impossibility of application, actually only four levels to stratify factual problems remain. Similarly SIS for setting type, frequency and length of daily support uses code 0 for no support. In case of catalogues the scale opens by 1. Level, which quantifies already diagnosed functioning loss? The above mentioned four-level stratifications are important for setting the degree of financial demands of further care (in this case setting the degree of special needs support) and for individual planning.

All three systems allow monitoring of progress or regress in time, monitoring of how each domain (function) influence each other in time and after applied (medical, psychological, special needs) intervention.

The systems standardize procedures of each departments and facilitate most of the client’s passability (in case of ICF moreover allows better information value and of diagnostic conclusions towards specialist in other fields of care.

Referential frame of ICF

ICF (WHO, 2001) concentrates on five basal components mapping functioning abilities, disabilities and health of a person:

- Corporal functions (physiological functions of body systems incl. psychological – b),
- Corporal structures (anatomical parts of body – organs, limbs and their parts – s),
- activity (realization of tasks or human activities) and participation (involvement in regular life situation) – d,
- factor of environment – e (facilitating or barrier environment of a concrete client)
- personal factors as addition sector

ICF uses alphanumerical code system – in comparison to ICD-10 small letter are used for determination of the components (b,s,d,e,) numbers than for specification of domains and of other quantificators.

Example: \( b \) 140 – function concentration – \( b \) 1400 ability to concentrate – \( b \) 1400.1 mild problem with concentration ability.

System of Catalogues for assessing the degree of SEN is relevant to following selected domains of components of body functions, activities, participations and environmental factors.

**b – body functions:**

- Chapter I. Intellectual functions (e.g. intellectual functions, psychosocial functions, orientation functions, concentration, memory, emotion, perception, psychomotor skills, cognitive functions, temperament, speech…)
- Chapter II. Sense functions and pain (vision, hearing, sense of taste, olfactory sense, sense of touch, pain, perception…)
- Chapter III. Voice and functions of speech (articulation, fluence, alternative vocalisation…)
- Chapter VII. Functions related to movement …(joint dynamics, stability, muscle strength, tonus, control of volitional movement, non-volitional movement, motion, walking…).
d – activity and participation:
- Chapter I. Learning and application of knowledge (observation, listening, trivial learning, concentration, thinking, reading, writing, counting, problem solving…)
- Chapter III. Communication (reception of spoken information, reception of non-verbal communication, reception of sign language, written language and expression of these information, conversation, usage of communication tool and techniques …)
- Chapter IV. Mobility (transport from place to place, change or preservation of body position, locomotion, use of hand for fine motor movements, walking, alternative way of moving, use of the means of transport.)
- Chapter V. Care of oneself (hygiene, use of toilette, dressing up, feeding, care of oneself…)
- Chapter VI. House life (gaining necessary thing a services, preparation of food, ability to do house hold works …)
- Chapter VI. Interpersonal relations (interpersonal behaviour, behaving towards strangers, formal and informal relations, family relations, intimate relations…)
- Chapter VIII. Main areas of life (upbringing and education –informal, pre-school, scholar, preparation for occupation, gaining, preservation and ending occupation, basic financial acting, life in community, holidays and free time…)

e – environmental factors:
- Chapter III. Support and relations (family, friends, authority, personal assistance. nursery staff…)
- Chapter IV. Attitudes (individual attitudes of persons described in above mentioned chapter)
- Chapter V. Services, systems and principles of management (services and systems – for living, community services, media, traffic, legal, non-profit, economic, social service, health, education and employee services and systems …)

Every open domain is quantified and assessed with a use of scales of qualifiers, number of which is different in each of the components.

**Body functions (b)** have a single qualifier – degree of impairment:
- 0 – without impairment
- 1 – mild impairment (problem is present less than 25% of time, in intensity, that a person is able to tolerate and which happened seldom in last 30 days)
- 2 - moderate impairment (problem is present less than 50% of time, in intensity, that influences everyday activities and which happens occasionally in last 30 days)
- 3 – severe impairment (problem is present less than 50% of time, in intensity, that influences partially disturbs everyday life of a person and which happens often in last 30 days)
- 4 – complete impairment (problem is present less than 95% of time, in intensity, that influences totally disturbs everyday life of a person and which happens every day in last 30 days)
- 8 – not specified
- 9 – not applied

Each of the open domain component Activity and participation (d) are assessed by couple of qualifiers— qualifier of achievement/output (first number behind the dot of the code) and capacity (second number).
Said in simple way, achievement/output is to be understood as an activity of a person in his/her everyday environment, i.e. with the help of factors of this environment such as compensation aids, wheelchair, personal assistant etc. Meanwhile capacity is to be understood as an ability of person without influencing factors of specific environment (without facilitating tools, without assistance...). The difference between the output and capacity reflects the difference between influence of a real and „standardized“ environment, which can lead to improvement of client’s output/achievement.

Identical scale as in case of body functions is used for both qualifiers – output/achievement as well as capacity (“without assistance”)

**Environmental factors (e)** reflect physical, social and attitudinal environment of a client and are scaled with a use of a special qualifier – barriers and facilitator of an environment as follows:

0 – no barrier
- 1 – little barriers
- 2 – medium barriers
- 3 – strong barriers
- 4 – complete barriers
- 8 – non specified barriers
- 9 – not possible to use

*In the coding system they are marked as number behind the dot (exxx.1)*

- 0 – no facilitator
- +1 – mildly supporting facilitator
- +2 – middle supporting facilitator
- +3 – significantly supporting facilitator
- +4 – completely supporting facilitator
- +8 – non-specified facilitator
- 9 – not possible to use

*In the coding system they are marked as number behind the sign +without dot (exx+1)*

3) **Concept of domains in Catalogue for assessing SEN of children with intellectual impairment**

As it was said in the introduction, each catalogue, for each impairment has newly and independently created so called domains, areas, which are relevant aspect of special educational needs assessed. Most of the domains are divided into subdomains and each function (loss) is assessed with help of so called statements. To each statement, eventually subdomain and domain – based on realized measurement (standardised instruments, clinical methods) - a rating is assigned. This rating is a result of diagnostic process SENCCs’ worker presented in a numeric form that shows degree (loss) of relevant function. See above. In case of catalogues for children and pupils with intellectual impairment this means following subdomains:

**I. Sensory perception:**
- visual perception
- hearing perception

**II. Motor activity:**
- gross motor skills
- fine motor skills
- grafo-motor skills
- psychomotor skills
III. Laterality:
IV. Sense of direction - functions:
V. Intellectual functions:
- structure of intelligence
- mind operations
- organising and planning
- recognition/rationcination
- ability of solving problems
- cognitive style

VI. Concentration:
- holding intentional concentration
- shift of concentration
- distribution of concentration

VII. Memory:
- short term memory
- medium-term memory
- long term memory

VIII. Phatic functions

IX. Emotions

X. Adaptability and sociability

XI. Acting and aspiration

XII. Taking care of oneself

XIII. Family environment

XIV. Education scheme

In frame of each domain, there is a thorough model for assessing degree of (necessary) supporting measures. An example of subdomain „Gross motor skills“ assessing pupils with intellectual impairment is shown below.

Gross motor skills are observed in close relation with fine motor and grafo-motor skills. Scale, quality and ability to use motor skills are monitored. Form of locomotion, way of crawling while doing goal task or relaxing is also carefully observed and conditions for optimal motor activity are dealt with.

In case of using standardised instruments (tests) we use transfer of standard scores onto a degree of supporting measures all according to a table or chart mentioned in the last chapter of this text. In case of clinical diagnostics it is possible to use rating of development degree of gross motor skills i.e. according to Strassmeir (1966) or –very roughly- according to following quantified statements based on ontogenesis of gross motor ability of intact individuals:

Quantificators for assessing degree of supporting measures I each statement:

- 0 - always, nearly all the time
- 1 - Quite often
- 2 - occasionally
- 3 - seldom
- 4 - never, rarely

<table>
<thead>
<tr>
<th>0 – 3 years</th>
<th>GROSS MOTOR SKILLS</th>
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<tbody>
<tr>
<td>Turning head side to side when lying on back</td>
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4) Results and conclusion

Above described model was developed for each of the mentioned health impairment. During the year 2011 the diagnostic process used in assessing the degree of SEN was verified on a sample of about 120 pupils with each impairment. Part of the Catalogue contains also a special DagTis2012, which allows entering the results of diagnoses in relevant electronic environment. This program also transfers results (entries) of realized diagnoses into supporting graphic chart, which allows the diagnostician better evaluation/assessment of possible changes in monitored functions in time. The whole system (new) of assessing the degree of SEN in children, pupils and students with disability will be presented at the National conference of SENCC´ work, which is going to take place in October in Prague. Afterwards, it is going to be used in all SENCC´s in the whole Czech Republic. Further evaluation and finishing of the model is expected to take place within the year 2014.

Thus, the author gave rise to a supporting model on the ICN platform that on the one hand takes into consideration specialized (diagnostic) procedures of appropriate science disciplines (primarily special needs pedagogy, secondarily psychology or medicine) and on the other hand reflects organization system framework of activity of school consulting agencies in the CR.
Literature:


