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An independent scientific journal
for interdisciplinary research in pedagogy,
with regard to pedagogy, special
pedagogy, pedagogical psychology
and subject didactics

CONTENT

EDITORIAL

Dear readers,

This year's second issue of e-Pedagogium is again published in English as two English issues a year are available now. The content corresponds to a broad educational focus of the journal. Individual papers present the results of educational research in various fields from psychology and education to didactics. As the literature is often scattered, reviews on some current topics are published. Half of the articles are focused on various issues of special education as disabled pupils education, or psychological aspects of their parents.

Milada Bocáková

THE USE OF AUGMENTATIVE AND ALTERNATIVE COMMUNICATION WITH PUPILS OF SPECIAL SCHOOLS IN THE CZECH REPUBLIC

Petra Bendová, Martina Čecháčková, Kateřina Fialová

Abstract

The paper examines the current state in the use of augmentative and alternative communication (hereinafter AAC) with special primary schools pupils in the Czech Republic. It defines the systems of AAC that are currently used at special primary schools in the Czech Republic as a tool of communication and education of pupils with a greater degree of intellectual disabilities. It describes the contribution of such tools to the development of specific segments of personality of the individuals with a greater degree of intellectual disabilities. It defines the preferred aspects for the choice of the communication system of the given target group, and it identifies the range of specialists that participate in the selection of the AAC system for special elementary schools pupils in practice. Furthermore, the paper describes the current state in the use of technical and non-technical devices that work on the basis of AAC, and it maps current situation in the area of further education of pedagogues that deal with AAC. The paper also discusses individual problems encountered by pedagogues of special primary schools during the application of AAC in practice.

Key words

Augmentative communication, alternative communication, functional communication, diagnostics, special primary school, pupil, intellectual disabilities, communication skills, social skills.

The importance of communication for humans

Communication is one of the basic human needs. Nevertheless, we often meet people whose ability to communicate verbally is considerably disrupted as a result of a severe health disability. (Lechta, 2002) It is essential to realize that these people should also be enabled to become active participants in communication. The systems of augmentative and alternative communication serve for such purposes. These systems are designed to minimize the

emerging communication deficit and to create new supportive or alternative communication channels that would enable people with severely disrupted expressive speech component to become equal communication partners. (Laudová in Škodová, Jedlička et al., 2007)

According to Linda J. Burkhart (2012) AAC can be defined as "a set of tools and strategies that an individual uses to solve every day communicative challenges. Communication can take many forms such as: speech, a shared glance, text, gestures, facial expressions, touch, sign language, symbols, pictures, speech generating devices, etc. Everyone uses multiple forms of communication, based upon the context and our communication partner. Effective communication occurs when the intent and meaning of one individual is understood by another person. The form is less important than the successful understanding of the message."

One group that should be paid particular attention to within the area of AAC is the group of individuals with a greater degree of intellectual disabilities (i.e. with moderate, severe and profound intellectual disabilities). (Klenková, 2000)

A brief description of selected AAC systems

Static and dynamic communication systems based on AAC are used in practice of special elementary schools for persons with intellectual disabilities. The static communication systems mainly consist of real objects and their miniatures, photographs, images, icons and pictures/symbols of PECS (picture exchange communication system). The dynamic communication systems most often include Sign language and Makaton for individuals with intellectual disabilities. (Bendová[1], 2011)

Within the introduction regarding the issue of using AAC in special elementary schools, we will try to briefly define the AAC systems, which are described in the literature and are used by people with intellectual disabilities, i.e. pictographs, PECS, Makaton and Teng Til Tale.

- Pictographs: they represent a maximum simplified view of objects, activities and characteristics that are comprehensible to all categories of people in terms of culture, disability, nationality and age. (Krahulcová, 2002) In special education practice pictographs have especially the substitution and supportive role in the speech development in children with severe intellectual disabilities, resulting in significantly impaired communication skills. (Kubová, 1997)

- Picture exchange communication system – PECS: is a pictorial communication system aimed at achieving the bipolar communication act between a child with intellectual disabilities and a person whom they communicate with in the form of image exchange as a reward. PECS is based on the visual discrimination of various symbols and understanding of the importance of the content, as well as the child's ability to manipulate symbols and organize them into simple (1 and multi-word) sentences. The use of PECS contributes to increasing the autonomy and independence of children with intellectual disabilities on the social environment. (Knapcová, 2003)
- Makaton: is a dynamic communication system, which consists of a set of 350 characters and symbols that have been modified so that they can be easily physically recognizable and meaningful. (Janovcová, 2003) The application of MAKATON into practice is associated with the signing of key words in a sentence, while the signing is accompanied by a rhythmic language, mimic elements, speech modulation and symbol demonstration. (Kubová, 1996) The use of MAKATON is often combined with the use of images, photographs and pictographs for young children. (Krahulcová, 2002) Adult users usually learn the symbols and signs with the help of the MAKATON guide (Language Program Manual).
- Teng til tale (TTT): is a visual motor communication system, which basis is the application of gestures and involving facial expressions of individuals with severe impaired communication ability. (Beerová, 2005) TTT is used by individuals with intellectual disabilities as a supplement to speech. (Janovcová, 2003) It is an open communication system of natural signs, which can be modified and supplemented according to individual client needs. Individual gestures are very simple and illustrative, respectful of individual reductions in the levels of motor, visual and cognitive functions of the system users. (Kubová, Pavelová, Rádková, 1999) TTT gestures are in usual communication supplemented by spoken language or symbols – photos, pictures, most often pictographs to increase the understanding of messages. (Kubová, 2002) The aim of TTT use is primarily to facilitate and encourage the development of verbal speech of individuals with impaired communication abilities, gradually eliminate the frequency of gestures in speech and move to the spoken language. As the secondary end points we can consider the development of fine motor skills, sense of rhythm, imitation ability and movement co-ordination. (Kubová, Pavelová, Rádková, 1999)

Specific research presentation

The aim of the specific research survey conducted at the University of Hradec Králové in March to October 2011 was to analyse the current situation as for the use of AAC with pupils with a greater degree of intellectual disabilities by means of a comprehensive survey. For this purpose, an anonymous questionnaire was created which was distributed to 160 special primary schools in the Czech Republic (hereinafter SP schools). Seventy-six SP schools from all over the Czech Republic participated in the survey. The questionnaire was addressed to managers of SP schools, i.e. directors of these school facilities, with a request to forward the questionnaire to a teacher within the school, who uses AAC in their practice, preferably – in a long term. The survey respondents are therefore SP school teachers. (Note: The overview of the number of SP schools involved in the research according to districts of the Czech Republic – see Table No. 1).

Table 1: Overview of the number of SP schools involved in the survey according to individual regions

region	number of SP schools involved in the research	number of SP schools involved in the research in %
Central Bohemia Region	16	21.10 %
Prague Region	10	13.16 %
Ústí nad Labem Region	10	13.16 %
Hradec Králové Region	8	10.50 %
Pardubice Region	7	9.20 %
Vysočina Region	6	7.89 %
Zlín Region	6	7.89 %
Plzeň Region	5	6.59 %
South Moravia Region	4	5.3 %
Liberec Region	4	5.3 %
Karlovy Vary Region	0	0 %
South Bohemia Region	0	0 %
Moravian – Silesian Region	0	0 %
Olomouc Region	0	0 %

Use of AAC in special primary schools

All the SP schools participating in the research use AAC tools on the basis of alternative communication as well as on the level of augmentative (supportive, supplementary) communication. (Bendová[1], 2011)

The responses of the respondents, i.e. special pedagogues from SP schools that are involved in the education of pupils with a greater degree of intellectual disabilities, indicate that – in relation to the overall proportion of pupils in these schools – with approx. 20–30 % of SP school pupils prefer the use of AAC tools based on alternative communication, and 35–80 % of pupils prefer the use of supportive/augmentative communication. Note: In the use of supportive communication means, it can be observed for pupils with moderate intellectual disabilities a considerable variance in % representation in using those means of communication. The answers of the respondents indicate that the utilization rate of the augmentative means of communication is influenced mainly by the level of impaired communication abilities of SP school pupils. With regard to the level of impaired communication abilities and speech intelligibility of pupils, augmentative communication means are used less in some schools (e.g. about 35 % of pupils) and more in other schools (e.g. up to 85 % of pupils).

Among the schools that represent the research sample, significant differences are present regarding the length of practice of AAC use/application in practice/work with pupils with a greater degree of disabilities. The dispersion is 2-12 years; 28 SP schools (i.e. 36.9 %) have been using the AAC tools for communication and education purposes for approx. 10 years; 20 schools (i.e. 26.3 %) for 12 years or more; 20 SP schools (i.e. 26.3 %) have been applying the AAC tools in practice for 5 years, and 8 SP schools (i.e. 10.5 %) have been using these tools for 2 years. (Note: When determining the length of the use of AAC in individual schools, the length of the use of AAC systems vs. the length of existence of the institution was not regarded). As for the obtained results, they correspond with the length of the AAC systems use in the Czech Republic as well as with the current trends in special pedagogy and in society, i.e. elimination of communication and information barriers in relation to disabled people (Note: mainly in the last decade). (Krahulcová, 1998)

Preferences of the AAC systems among pupils with intellectual disabilities

Among other things, the survey studied preferences of the AAC systems among pupils of SP schools. The analysis of the collected data indicates that most individuals with intellectual disabilities attending SP schools communicate with the support of pictographs and use the method of global learning. This fact was stated by 72 out of 76 respondents (i.e. 94.7 %), i.e. SP schools pedagogues representing the research sample. Further, 68 respondents (i.e. 89.5 %) employ objects for communication. At 64 SP schools (84.2 %) the method of social reading is applied, 52 schools (i.e. 68.4 %) apply Picture Exchange Communication System (PECS), 48 (i.e. 63.2 %) use Teng Til Tale, 32 schools (i.e. 42.1 %) can use reading/writing while communicating on the basis of AAC, in 20 cases (i.e. 26.3 %) the Makaton system is preferred. Six schools (i.e. 7.9 %) use other communication devices based on AAC (i.e. Baby Signs in 2 institutions, photographs in 4 institutions). In one case communication on the basis of AAC is carried out with the support of the Bliss system (i.e. 1.3 %).

Table 2: Use of AAC systems with pupils in SP schools

AAC system	number of schools where the AAC system is used	number of schools where the AAC system is used %
pictographs	72	94.7 %
Bliss system	1	1.3 %
PECS	52	68.4 %
writing/reading	32	42.1 %
social reading	64	84.2 %
Objects	68	89.5 %
TTT	48	63.2 %
Makaton	20	26.3 %
Sign Language	8	10.5 %
Other	6	7.9 %

Use of the AAC systems with pupils of SP schools

- pictograms
- Bliss
- PECS
- writing/reading
- social reading
- objects
- TTT
- Makaton
- Sign Language

(pie chart values: 72, 1, 52, 32, 64, 68, 48, 20, 8, 6)
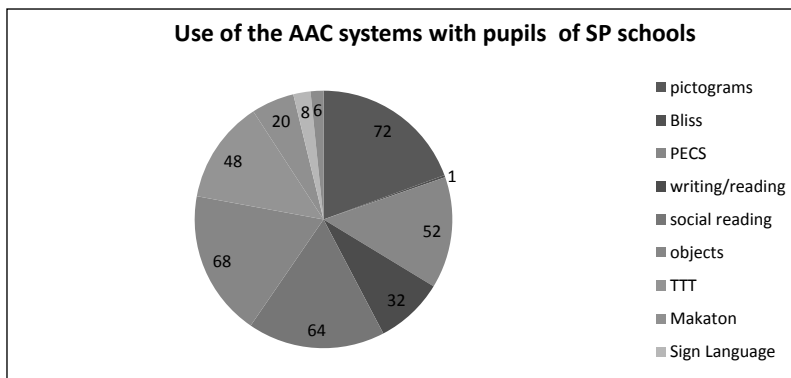
The choice of the AAC system

The choice of the appropriate AAC system for the individuals with a greater degree of intellectual disabilities is a crucial moment for the formation of functioning AAC-based communication between the intellectually disabled person and his/her immediate as well as broader communication environment. (Knapcová, 2005) Within the research we attempted to quantify the most commonly considered terms in the choice of the AAC system in SP school pupils. In this context it should be pointed out that in selecting an appropriate AAC system for a particular SP school pupil it is always necessary to proceed individually and take into account specific characteristics of the potential user of AAC.

Following the responses of survey respondents, the aspect of the AAC system which is preferred is the existing verbal expression of the intellectually disabled individual, his/her communication potential and his/her intellectual level. The list of aspects that are further considered comprises upper limb motor activity, the overall level of motor skills, coordination of upper extremities, then the vision and hearing quality of the disabled individual. (Bendová[1], 2011)

Other aspects that were mentioned within the choice of the AAC system by the respondents comprises of the needs of the client and his/her family (Note: Detailed overview of individual aspects of the choice of AAC system – see Table No. 3).

Table 3: Diagnostic aspects of the choice of AAC systems with pupils of SP schools

aspect of the choice of AAC systems	degree of influence on the choice				
	number of respondents				
overall level of motor skills	1	2	3	4	5
	4	4	36	4	8
upper limb motor activity	1	2	3	4	5
	4	4	12	16	24
coordination of upper extremities	1	2	3	4	5
	4	4	12	20	25
verbal expression	1	2	3	4	5
	4	4	16	20	32
communication potential	1	2	3	4	5
	4	0	8	20	52
intellectual level	1	2	3	4	5
	8	0	16	32	12
vision	1	2	3	4	5
	0	4	12	24	20
hearing	1	2	3	4	5
	0	0	8	16	20
other	1	2	3	4	5
	0	0	8	4	4

Explanatory note: 1 – minimal influence on the choice of AAC (= 5–20 %);
2 – below-average influence (= 25–45 %);
3 – average influence (= 45–65 %);
4 – moderately high influence (= 70–85 %);
5 – maximum influence (= 90–100 %).

Concerning the participation in choosing the appropriate ACC-based communication system, the pedagogues from SP schools cooperate most often, i.e. in 72 cases (94.7 %), with pupils' parents, in 48 cases (63.2 %) they discuss their choice with consultants in special education centres (Note: mostly it concerns consultants in special education centres for intellectually disabled pupils and for pupils with autistic spectrum disorders). Thirty-two respondents (42.1 %) discuss it with speech therapists of SP schools. In 24 cases (31.6 %) the choice of the AAC system is discussed within the consultations

provided by specialists from the Centre for Alternative and Augmentative Communication – Prague. Eight pedagogues from SP schools (10.5 %) state that they do not consult the choice of the AAC system with anybody and that they rely exclusively on the erudition of school specialists.

Table 4: Participation of experts in the selection of the AAC system

counselling object	number of respondents	number of respondents in %
special education centres	48	63.2 %
pupils' parents	72	94.7 %
speech therapist of SP	32	42.1 %
clinical speech therapist	24	31.6 %
Centre for AAC Prague	24	31.6 %
do not use consulting services in the selection of AAC	8	10.5 %
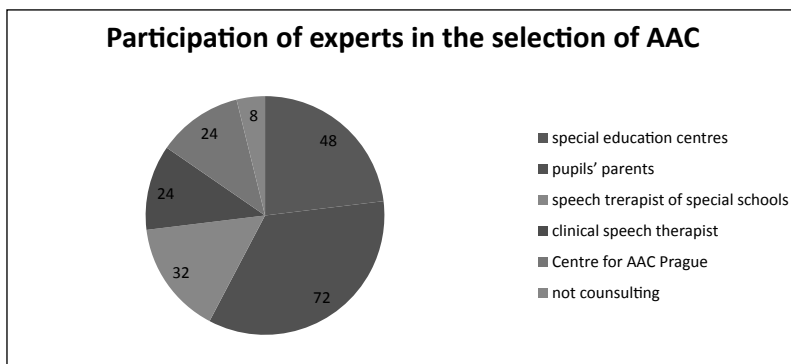
Support of counselling services in the field of AAC

Moreover, the survey examined whether pedagogues are provided with methodical support of special education centres for intellectually disabled pupils (special education centres for pupils with autistic spectrum disorders or with combined disorders) during the application of AAC in the process of education of pupils with a greater intellectual disabilities, with regard to the Decree No. 116/2011 Coll. on the provision of counselling services in schools and school counselling facilities.

In this respect the survey mapped the contentment of SP school pedagogues with the quality of the support provided.

Eight respondents (i.e. 10.5 %) state that they are not provided with any methodical leadership and support while launching the AAC systems in the education process of pupils in SP schools. 4 respondents from SP schools (5.3 %) are not introduced to any methodical support because they do not require any, and 64 respondents (i.e. 84.2 %) indicate that they are offered methodical leadership by special education centres in the application process of AAC. Regarding this support, 12 respondents are 100% satisfied with the services of the special education centres, 8 respondents are 75% satisfied, 44 respondents are 50% satisfied, 12 respondents are 25% satisfied and none of the respondents participating in the survey is dissatisfied.

Table 5: Support for SPC in AAC

methodological support for AAC	number of respondents	number of respondents in %
methodological support is not provided	8	10.5 %
methodological support is not provided/ AAC user does not require it	4	5.3 %
methodological support is provided	64	84.2 %

Table 6: Satisfaction of educational institutions with the intervention of AAC by SPC

satisfaction rate	number of respondents	number of respondents in %
100% satisfaction	12	15.9 %
75% satisfaction	8	10.5 %
50% satisfaction	44	57.7 %
25% satisfaction	12	15.9 %
0% satisfaction	0	0 %

The implementation obstacles of AAC in practice

To optimize the usability of AAC systems in practice of SP schools, the survey examined the obstacles that the pedagogues encounter in SP schools. In 48 cases (63.2 %) the respondents mention the limited usability of AAC systems, or the use and usability of AAC in the school environment. Thirty-

two respondents (i.e. 42.1 %) refer to insufficient material background for the use of AAC, 24 respondents (i.e. 31.6 %) are not satisfied with the offer of the available AAC based materials. 20 respondents (i.e. 26.3 %) point out the lack of trained pedagogues, 20 out of 76 respondents (i.e. 26.3 %) refer to the lack of the interest in AAC-based communication/education in pupils' parenes. 20 respondents (i.e. 26.3 %) are not satisfied with the methodical support of special education centres. 1 respondent (1.3 %) stated that he/she considered the current AAC training offer insufficient, and one respondent did not identify any obstacles that would limit the use of AAC in SP schools practice.

Table 7: Barriers in the use of AAC in SP schools

satisfaction rate	number of respondents	number of respondents in %
limited usability of AAC systems	48	63.2 %
limited supply of AAC materials usable in teaching	24	31.6 %
lack of trained teachers	20	26.3 %
lack of interest of the pupils with intellectual disabilities' parents to communicate on the basis of AAC	20	26.3 %
dissatisfaction with the methodological guidance	20	26.3 %
insufficient supply of training in AAC	1	1.3 %
no gaps / barriers	1	1.3 %

Concerning the opinion of 20 respondents (26.3 %) that refer to "the lack of trained pedagogues in the field of AAC", it is necessary to point out the fact stated by 44 of 76 respondents (i.e. 57.9 %) that pedagogues of SP schools participate in AAC-focused trainings/train up seminars "only" to a limited extent. 32 out of 76 respondents (i.e. 42.1 %) do not participate in such seminars at all.

Table 8: Participation of teachers in the training of AAC

participation in training of AAC	number of respondents	number of respondents in %
limited participation in training of AAC	44	57.9 %
do not participate in training of AAC	32	42.1 %

The above mentioned facts imply that the increased activity of SP school teachers within further education in the field of AAC could significantly contribute to the optimization of the AAC use at these types of schools.

Moreover, the responses indicate that in case the pedagogues participate in further education/train up seminars in the field of AAC, the education/trainings take place most often under the auspices of the Institute of Pedagogical-Psychological Consulting of the Czech Republic, as well as the Association Helping People with Autism Prague (APLA Praha), Centre for Augmentative and Alternative Communication Prague (CAAK Praha), National Institute for Further Education (NIDV) and some special education centres for intellectually disabled pupils. (Bendová[1], 2011)

The optimization of the communication potential of the individuals with greater forms of intellectual disabilities

The research outcomes show that within the optimization of the communication potential of the individuals with greater forms of intellectual disabilities SP schools use a variety of technical devices: 60 SP schools (78.9 % of the research sample) use computers, 56 SP schools (73.7 %) use communication tables, 24 SP schools (31.6 %) use communicators, 12 SP schools (1.8 %) use communication pallets, in 8 SP schools (14.3 %) pupils use special communication books/diaries, 1 school (1.3 %) uses photo albums in order to support the pupils' communication competences. At 1 school (1.3 %) a communication notice board is used for the same purposes. 1 school (1.3 %) works with another non-specified methodical material. (Zikl, Bendová, 2011)

Table 9: Optimization of communication using AAC

means of optimization of AAC use	frequency of use of supportive means	frequency of use of supportive means in %
computer	60	78.9 %
communication tables	56	73.7 %
communicators	24	31.6 %
communication pallets	12	15.8 %
communication books/journals	8	14.3 %
photo album	1	1.3 %
communication notice board	1	1.3 %
unspecified communication material	1	1.3 %

Optimalizatin of using AAC

computer
communication tables
communicators
communication pallets
communication books/journals
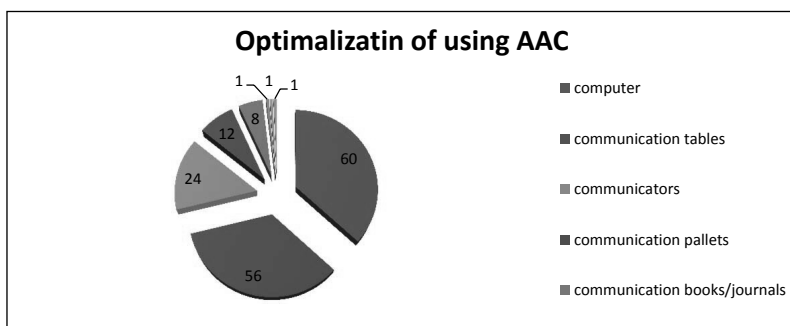
Twenty-eight SP schools (36.9 % of the research sample) use special software within the implementation of AAC in SP school practice. Such software is used for the formation of communication tables, for training of work with communication symbols, etc. Such special software comprises of programmes such as Boardmarker, SymWriter, Altík and Méďa. (Bendová[2], 2011)

The influence of the AAC systems on the development of pupils with intellectual disabilities

When trying to determine the influence of AAC systems in the development of pupils with greater degrees of intellectual disabilities, the research outcomes denote that the greatest importance of AAC is assigned to the development of the social competences of users, then to cognitive abilities

and least to the development of the expressive component of speech. (Kra-hulcová, 1998)

As for social competences and the significance of AAC in the contribution to their development, 24 respondents consider AAC contributes in 50 %, 24 respondents in 100 %, 20 respondents in 25 %, and 8 respondents in 75 %.

The development of cognitive abilities is closely associated with the development of speech and with the possibilities of its expansion to the surrounding environment and active participation in educational activities. According to 32 respondents, AAC participates in the development of cognitive abilities of an intellectually disabled individual in 50 %, 28 respondents think AAC participates in 75 %, 12 respondents think it participates in 25 %, 4 respondents think the share of AAC is 0 %. No respondent thinks AAC participates in the development in 100 %.

According to secondary literature, the expressive component of speech supported by the AAC systems is developed particularly when AAC the augmentative aspect is used (supportive, developing communication). According to 36 respondents, AAC participates in the development of the expressive speech component not more than 25 %, 28 respondents in 50 %, 8 respondents in 75 %, 4 respondents in 100 %. No respondent thinks AAC does not participate at all, i.e. in 0 %.

Within the context of the development of sub-competences in SP school pupils and the use of the AAC systems, the survey also examined the use of these systems in individual education fields. Seventy-five respondents (i.e. 98.7 %) state that they use AAC equally in all educational fields at the SP schools. One respondent (i.e. 1.3 %) points to the fact that AAC in his/her school is mainly used within intellectual and sensory education. (RVP ZŠS, 2008)

As follows from the text above, the importance of the use of AAC for pupils in SP schools lies mainly in the domain of communication as well as education and integration. (Valenta, Müller, 2009) The opinions of special pedagogues on the influence of AAC in individual areas that are significantly associated with the socialization process of intellectually disabled children are demonstrated in the table below.

Table 10: Overview of the evaluation of the importance of AAC for individual areas of socialization of pupils in SP schools

area of socialization	degree of the importance of the use of AAC for the given area (1 = minimal importance… 5 = highest importance)	number of respondents (%)
communication	1	4 (5.3%)
	2	8 (10.5%)
	3	4 (5.3%)
	4	12 (15.7%)
	5	48 (63.2%)
education	1	8 (10.5%)
	2	0 (0%)
	3	12 (15.7%)
	4	28 (36.9%)
	5	28 (36.9%)
integration	1	4 (5.3%)
	2	4 (5.3%)
	3	36 (47.4%)
	4	20 (26.3%)
	5	12 (15.7%)

Conclusion

We can conclude that the methods and means of AAC have become an integral part of communication, education as well as socialization/integration of individuals with greater degrees of intellectual disabilities combined with a severely distorted expressive speech component. At the same time it is vital to point out that the quality of use of AAC there are considerable differences among SP schools in the Czech Republic. The presented research aimed to perform a primary probe into the use of AAC in the special elementary schools in the Czech Republic. Given that only one special teacher from educational institutions surveyed always responded to the sub-items of the questionnaire, the data presented cannot be generalized at this time, but it can be considered as a basis for further implementation of the research in this area.

Despite the limited degree of the questionnaire survey output generalization, it is obvious that in order to improve the use of AAC in education of pupils with greater degrees of intellectual disabilities it is crucial to carry on with the education and with increasing the erudition of SP school staff in the AAC use and its further implementation to the education process of pupils with greater degrees of intellectual disabilities.

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INITIAL MATHEMATICS TEACHER TRAINING
AT UNIVERSITY OF VIENNA

Petr Emanovský, Bronislava Štěpánková

Abstract

The quality of mathematics education is a very contemporary didactic topic at present. Improving the quality of this education is unthinkable without a quality mathematics teacher training at universities and other educational institutions. Many authors describe this issue (e.g. Hejný 2001, Monk 1994). The article deals with the contents and organization of the study programme for future teachers of mathematics at the Mathematical faculty of the University in Vienna of connection with the innovation of similar studies at the Faculty of Science of Palacký University, Olomouc that is realized within the ESF project "Professional science teacher training for careers in a competitive environment".

Key words

Teacher training, study programme, mathematics, University of Vienna.

One of the key activities of the ESF project entitled "Professional science teacher training for careers in a competitive environment" that is currently carried out at the Faculty of Science of Palacký University, Olomouc is innovation of the initial training for future teachers of scientific branches. A field trip to the Mathematical Faculty of the University of Vienna was organised within this core activity, among others. The aim of the trip was to familiarize ourselves with the content of studies for future teachers of mathematics at this university and consequently use the experience gained during the trip to deal with our project. The Austrian school system could bring us significant innovative ideas due to the common historical roots with our one (Greger, D. and Ježková, V., 2006).

In Austria, higher education belongs to the competence of the Federal Ministry for Science and Research. The largest and most important of these is the University of Vienna, which was founded in 1365 and is the oldest existing university in the German-speaking countries.

Austria is a country with open access to higher education for all successful graduates of secondary schools and their interest is great. However, even for those who were not able to graduate from secondary school and whose age is between 25 and 45 years, access to tertiary education is not closed completely. According to the evaluation and job requirements one has the opportunity to study a particular study programme at a college. After successful completion of the so-called vocational graduation exam one can obtain permission for higher studies in the particular field.

Students at Austrian universities can study as ordinary, extraordinary or visiting students. The most common form of study is of course the ordinary one which is completed with the acquirement of a degree, i.e. diploma studies and doctoral studies. In addition, the short study can be expanded.

The diploma studies focus primarily on professional training necessary for future work of teachers. The length of the study is usually from eight to ten semesters and successful graduation is completed with the professional degree diploma. But not all students who start the study graduate successfully. Long-term monitoring shows that success of the study is just over fifty percent.

The time range of the short study is usually from four to six semesters and corresponds roughly to the first stage of the diploma studies. The end of the study is not associated with an academic degree, but with a professional designation.

The study of mathematics at the University of Vienna has a rich tradition and currently it is realized mainly on the Mathematical faculty. Bachelor studies of professional mathematics provide a comprehensive basic course in pure and applied mathematics. The bachelor's degree is followed by master's and doctoral degree programmes, some of which are taught in English. A set of related programs on the application of mathematics in economics is also provided by the Faculty of Economics.

The so-called parallel model of the structure of the study programme is predominant in the initial training of teachers of higher secondary schools in Austria, which means that academic and professional learning take place during the study time simultaneously (Nezvalová, 2002). Similar is the situation in the teacher's study of mathematics at the Mathematical Faculty of the University of Vienna, as shown in the tables. The study program "Teaching of Mathematics" consists of two parts with the standard length of study of four and five semesters (total length is roughly four and a half years). Math-

ematics is combined with a second teaching subject, which is either science or computer science.

The standard length of the first stage of study is four semesters. Table 1 contains compulsory professional subjects of the first stage of studies, which are supplemented by one of the six compulsory optional didactically oriented subjects (Table 2). It is obvious that students do not have too much freedom in the choice of courses at the beginning of their studies. The study programme includes mainly compulsory subjects, among which "Introduction to the Study of Mathematics" has the key position. Within this course students should be familiar with basic mathematical concepts and methods. Pilot teaching of similarly oriented subject is currently realized at the Faculty of Science of Palacký University, Olomouc within our project. An equally important subject, which is included at the beginning of the study, is the subject of "Basic PC skills". The goal of the subject is to acquire basic skills and habits for working with a PC and then with a suitable mathematical software. These subjects are followed by two basic training courses in the first semes-

Tab. 1: The first stage of study: Mathematics – compulsory subjects

Subject	Number of hours
Introduction to Mathematics	3
Basic Work with PC	2
Introduction to Analysis	3
Exercise: Introduction to Analysis	2
Analysis of One Variable for Teachers	2
Exercise: Analysis of One Variable for Teachers	2
Real Analysis of Multiple Variables and Complex Analysis of One Variable for Teachers	5
Exercise: Real Analysis of Multiple Variables and Complex Analysis of One Variable for Teachers	2
Introduction to Linear Algebra and Geometry	3
Exercise: Introduction to Linear Algebra and Geometry	2
Linear Algebra and Geometry for Teachers	4
Exercise: Linear Algebra and Geometry for Teachers	2
Theory of Numbers	2
Exercise: Theory of Numbers	1
Total	35

Tab. 2: The first stage of the study: Didactic of Mathematics – compulsory optional subjects

Subject	Number of hours
School Mathematics 1 (Algebra and Arithmetic)	2
Exercise: School Mathematics 1 (Algebra and Arithmetic)	1
School Mathematics 2 (Geometry)	2
Exercise: School Mathematics 2 (Geometry)	1
School Mathematics 3 (Applied Mathematics)	2
Exercise: School Mathematics 3 (Applied Mathematics)	1
School Mathematics 4 (Vector Calculus)	2
Exercise: School Mathematics 4 (Vector Calculus)	1
School Mathematics 5 (Stochastics)	2
Exercise: School Mathematics 5 (Stochastics)	1
School Mathematics 6 (Differ. and Integ. Calculus)	2
Exercise: School Mathematics 6 (Differ. and Integ. Calculus)	1
Total	3

ter – "Introduction to Analysis" and "Introduction to Linear Algebra and Geometry", together with appropriate exercises. In the remaining semesters during the first stage of study, students complete other required courses (see Table 1). In addition, students attend one chosen subject which focuses on school mathematics, with the total time of 3 hours (2 hours lecture, 1 hour exercise).

The second stage of study normally takes five semesters. Students here attend other compulsory professional courses (Table 3) supplemented by three compulsory optional subjects (Table 4 and Table 5). The focus of the compulsory optional courses and seminars meets the requirements of current needs of teaching practice (e.g., "Gender Issues in Mathematics", "English for Mathematics", "Elementary Geometry", etc.). An important part of the second stage of the study is a set of compulsory didactically oriented subjects (Table 6). Basically, these are subjects that the students completed during the first stage, but this time they are designed with an emphasis on didactic aspects.

The teacher training would be unthinkable without practical experience, without teaching practice. The Mathematical Faculty of the University of Vienna provides its students with a special seminar of "Working in the school" focused on the preparation for independent teaching within the so-called first

stage of the professional training, among others. However, the main focus of the practical training of teachers is represented by the second stage of the professional training (Unterrichtspraktikum), which involves one year of educational activities at school. However, this part of the training is not organized by the university, but by a relevant institute of further education.

Tab. 3: The second stage of study: Mathematics – compulsory subjects

Subject	Number of hours
Applied Mathematics for Teachers	3
Exercise: Applied Mathematics for Teachers	1
Stochastics for Teachers	4
Exercise: Stochastics for Teachers	2
Differential Calculus for Teachers	2
Exercise: Differential Calculus for Teachers	1
Algebra for Teachers	2
Exercise: Algebra for Teachers	1
Practical Work with PC	3
Total	19

Tab. 4: The second stage of study: Mathematics – compulsory optional subjects

Subject	Number of hours
Gender Aspects in Mathematics	2
The History of Mathematics and Logic	2
Philosophy of Mathematics	2
Elementary Geometry	2
English for Mathematicians	2
Total	2

Tab. 5: The second stage of the study: Mathematics – compulsory optional workshops

Subject	Number of hours
Seminar for Teachers (Algebra)	2
Seminar for Teachers (Applied Mathematics)	2
Seminar for Teachers (Analysis)	2
Seminar for Teachers (Stochastics)	2
Total	4

Tab. 6: The second stage of the study: Didactic of Mathematics – compulsory subjects

Subject	Number of hours
Introduction to Mathematics	3
Basic Work with PC	2
Introduction to Analysis	3
Exercise: Introduction to Analysis	2
Analysis of One Variable for Teachers	2
Exercise: Analysis of One Variable for Teachers	2
Real Analysis of Multiple Variables and Complex Analysis of One Variable for Teachers	5
Exercise: Real Analysis of Multiple Variables and Complex Analysis of One Variable for Teachers	2
Introduction to Linear Algebra and Geometry	3
Exercise: Introduction to Linear Algebra and Geometry	2
Linear Algebra and Geometry for Teachers	4
Exercise: Linear Algebra and Geometry for Teachers	2
Theory of Numbers	2
Exercise: Theory of Numbers	1
Total	35

Relationship between vocational and didactical training expressed by numbers of hours and in percentage is shown in the following two graphs. Note that as the didactical subjects are considered also all exercises of "subjects for teachers".

Fig. 1: Relationship between vocational and didactical training (number of hours)
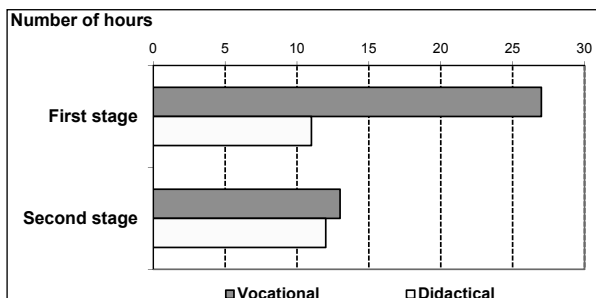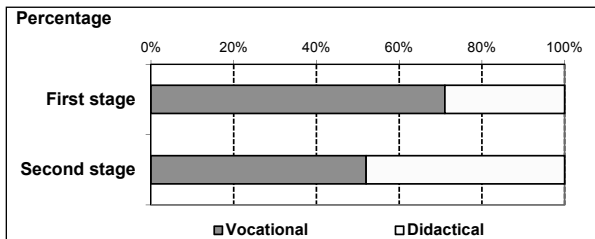
Fig. 2: Relationship between vocational and didactical training (percentage)

During our trip to the University of Vienna, we had an opportunity to visit teacher-training programme for teaching of mathematics, namely two subjects of the second stage of the study – "English for Mathematicians", conceived as CLIL – Content and Language Integrated Learning (see e.g. Novotná and Hofmannová, 2000) and "Practical work with PC". In both cases, we were pleasantly surprised, especially by the professional approach of the teacher and the naturally active and independent work of the students. In the course of "English for Mathematicians" we witnessed not only the very good language skills of the students but also group presentations with self-assessment, all of which required a minimal input on the teacher's part. The course "Practical Work with PC" was organized in the following way: it took place simultaneously in two classrooms led by students of higher classes supervised by one teacher. Within the subject, students were solving geometrical problems frontally using suitable software (GeoGebra – see e.g. Bímová, 2010). This subject has inspired us to create a new subject for our students – "Dynamic Models in Teaching of Stereometry".

All the suggestions and the valuable experience gained during our field trip to Vienna show the need of further improvement of teacher training for teachers of mathematics at the Faculty of Science of Palacký University, Olomouc. The training of future teachers should be realized in the spirit of strengthening their self-esteem, developing their ability to solve individual problems, leadership of professional discussions, searching, processing and presentation of information using the latest technology. Only teachers prepared in this way can succeed in today's highly competitive environment.

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PSYCHOLOGICAL FUNCTIONING OF PARENTS OF CHILDREN WITH CONGENITAL HEART DISEASE: REVIEW OF LITERATURE

Joanna Fryt, Karolina Sikora

Abstract

Advancement in medical treatment of congenital heart disease (CHD) has improved dramatically over the past 20 years creating a new group of children who grow up with CHD and parents who deal with challenges of the disease. Although it is clear that having a child born with CHD rapidly increases demands and stress placed on the family, little is known about the specifics of parental experience and factors determining family adaptation. In the article we review previous studies on parental well-being and mental health, caregiving demands, parent-child interactions, family functioning and satisfaction with medical care. We describe several psychosocial factors which threaten parents' well-being and promote their resilience and positive adaptation. Finally, we discuss conclusions and challenges for future researches as well as practical implications of rewieved studies.

Key words

Congenital heart disease, parents, psychological functioning.

Congenital heart disease (CHD) affects approximately 1 in 125 live births which means that 1 million babies are born each year with cardiac disease (Tchervenkov et al., 2008). There are various cardiac malformations with varying degree of severity ranging from minor defects that may spontaneously correct themselves, to severe defects that demand surgical intervention (Berant, Mikulincer et al., 2003). Advancement in medical treatment of CHD has dramatically reduced mortality among patients (Moller, Taubert et al., 1994) creating a new group of children who grow up with CHD and parents who deal with challenges of the disease[1]. Although it is clear that having a child born with CHD rapidly increases demands and stress placed on the family (Svavarsdottir, McCubbin, 1996), little is known about the specifics

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[1] According to Moller, Taubert et al., (1994), in the nineties survival to adulthood among patients with CHD increased to 85 %.

of parental experiences in the changing course of the disease and factors determining family adaptation (Lawoko, 2007). Several studies indicate that important proportion of children and adolescents with CHD continue to exhibit emotional, behavioral and cognitive disturbances (Amianto, Bergui et al., 2011). Similarly, recent data show that approximately 1/3 of parents of children with CHD is at risk of long-standing psychosocial morbidity, suggesting that psychological intervention may be beneficial to that group (Lawoko, Soares, 2006). In the article we review previous studies on psychological functioning of parents of children with CHD and discuss conclusions and challenges for future researches.

Parental stress and adaptation according to theoretical models

For three decades now several models have been proposed to describe how parents adapt to stress of a child's chronic illness and what factors influence eventual outcomes. In 1975 D. Drotar described a sequence of parental reactions to the birth of a child with congenital malformation, including heart disease: phase of shock, denial, sadness-anger, adaptation and reorganization (Drotar, Baskiewicz et al, 1975). The model was based on analysis of interviews with parents of children 0–5 years old, who described their perceptions of the ill child, parental feelings and attachment, effects of the disease for the family and coping strategies. Adaptation phase is described as increasing comfort and confidence in caring for a child as well as awareness of its physical vulnerability whereas reorganization phase involves long-term acceptance of the child, greater sense of stability and social support. Duration and intensity of the phases vary significantly among parents, with those who achieve adaptation with time and those who experience prolonged crisis. To establish which factors determine positive and negative outcomes several models were created, most of them adapted from the theory of stress and coping described by R. Lazarus and S. Folkman in 1984 (Mussatto, 2006). In the Resiliency Model of Family Adjustment and Adaptation proposed by M. and H. McCubbin (McCubbin, McCubbin et al, 1993; in: Svavarsdottir, McCubbin, 1996) family's response to stress occurs in two phases. The adjustment phase focuses on events that require few changes in family functioning but if the changes are not adequate, the family moves into a crisis and disorganization where major changes are necessary. During adaptation phase family attempts to achieve balance and well-being and multiple variables influence

this process on an individual and family level (Svavarsdottir, McCubbin, 1996). The Transactional Stress and Coping Model of Adjustment to Chronic Illness proposed by R. Thompson describes the association between determinants of maternal and child's adjustment (Thompson et al., 1993, 1994). Maternal adaptation process includes several cognitive factors (perception of daily hassles and illness tasks, maternal self-efficacy and health-locus of control), methods of coping (adaptive and palliative strategies) and perception of family functioning (supportive, conflicted or controlling). These factors are moderated by illness variables and demographic parameters (type and severity of the disease, child's age and parental socioeconomic status). Both M. and H. McCubbin's and R. Thompson's models are frequently used in studies exploring determinants of parental adaptation to child's congenital heart disease (Davis, Brown et al., 1998, Mussatto, 2006).

Studies on parental well-being and mental health

According to metaanalysis of studies on well-being among parents of children with CHD carried out in 1985–2005, there is a consensus that this group is faced with more psychosocial problems than parents of healthy children (Lawoko, 2007). Parents of children with CHD generally report concerns about their offspring's psychosocial adaptation, medical prognosis, financial and caregiving burdens associated with the illness. They are more likely to manifest symptoms of depression and anxiety, more marital problems and lower quality of life. When compared to parents of children with non-cardiac diseases like cystic fibrosis and asthma, they report more distress (Lawoko, 2007). Majority of studies indicate that illness severity does not determine parents' well-being and mental health (Davis, Brown et al., 1998; Tak, McQubbin, 2002; Lawoko, Soares, 2002). However, perceived impact of the disease (defined as psychological, social and financial consequences of CHD for the family) as well as availability of social support, socioeconomic status and gender are considered main factors responsible for parents' well-being (Lawoko, 2007).

In a prospective longitudinal study among 630 Swedish parents of children with CHD, S. Lawoko and J. Soares (2006) revealed that important proportion of them manifests significant depression (18 %), anxiety (18 %), somatization (30 %) and hopelessness symptoms (16 %), whereas in 22 % of mothers and 7 % of fathers these symptoms persist over 1-year period.

Mothers exhibit more than twice as much symptoms as fathers and it is associated with mothers' higher caregiving burden (defined as how much time, above the ordinary, individual parent devotes to caring for the child with CHD every day) and worse financial situation. Perceived social support defined either as an availability of deep emotional relationships or availability of social networks (social integration) is another determinant of well-being among parents of children with CHD. As parents' social support availability and financial situation improves with time it is followed with significant improvement in reported mental health.

Several cognitive factors mediating between social burdens and psychological adjustment among American mothers of small children with CHD were investigated in older study conducted by C. Davis and R. Brown et al. (1998). According to R. Thompson's model mothers coping strategies, perception of daily hassles and illness tasks, maternal self-efficacy, locus of control and mental health were assessed. Coping strategies were divided in two categories: palliative coping (emotion-focused, avoidance, wishful thinking and self-blame) and adaptive coping (problem-focused, cognitive restructuring, seeking information and social support) referring to R. Lazarus and S. Folkman model (1984, in: Davis, Brown et al., 1998). Similarly to S. Lawoko and J. Soares findings (2006), authors revealed that above 1/3 of mothers met the criteria of poor psychological adjustment. Maternal poor mental health was associated mainly with predominance of palliative methods of coping, particularly avoidance and self-blame as well as high levels of perceived daily stress. Self-efficacy in illness tasks and locus of control were unrelated to mothers' adjustment (Davis, Brown et al., 1998).

In Australian longitudinal study on psychological adjustment to child's cardiac surgery (Menahem et al., 2007) mothers' mental health and locus of control were assessed prior to the operation and 12–50 months after. One year after child's surgery, mothers still manifested strong tendency to attribute events to luck or chance (external locus of control) despite significant decrease in anxiety and depression symptoms.

In summary, previous studies seem to support the notion that parents of children with CHD, especially mothers, are at increased risk of depression or anxiety symptoms and other psychosocial problems. Data suggest that palliative methods of coping are related with poor mental health, while

social support availability and higher socioeconomic status is related with improvement in mental health.

The impact of congenital heart disease on family life

There are several studies investigating the impact of congenital heart disease on family life. Those studies are focused on caregiving demands, marital satisfaction and general family system functioning.

Caregiving demands. As child's health status is one of numerous factors that influence parenting practices, L. Carey and B. Nicholson et al. (2002) compared the early child-rearing practices between mothers of children with congenital heart disease (CHD) and mothers of healthy children. Contrary to the authors' expectations, both maternal groups reported similar nurturing and disciplining practices. The only significant difference that emerged from observational data concerned parental expectations, which were lower for mothers of children with CHD. Qualitative data collected in the same study revealed that unexpected diagnosis of serious health condition was an important aspect of maternal experience. Mothers struggled with significant uncertainty regarding their child's future and maintained heightened levels of vigilance regarding their children's ongoing health status.

Being a parent of CHD infant is associated with specific caregiving demands. Svavarsdottir and McCubbin (1996) examined which of them were the most difficult and time-consuming. Mothers identified feeding the infant as the most time-consuming and the third most difficult caregiving task, while the most difficult task for them was providing emotional support for the partner. Fathers of infants with CHD reported that the most time-consuming and the most difficult caregiving task was providing emotional support for the partner. The authors suggest that mothers and fathers of CHD infants assume different roles in maintaining good functioning of the family system. The mother may be more responsible for the physical care of the infant, while the father may provide more emotional support for the partner, infant and other children in the family.

The fact that mothers identify feeding the infant as a very demanding caregiving task may be related with problems that may occur during the feeding process, such as shortness of breath or cyanosis. Other possible explanations are the mother's insecurity in reading the infant's cues and her lack of information on how to handle the infant during feeding (Svavarsdottir,

McCubbin, 1996). M. Lobo (1992) examined parent-infant interactions during feeding. Infants with CHD were significantly less responsive to their caregivers than healthy controls. They also scored lower on Clarity of Cues subscale. Parent-infant interactions during feeding play important role in bonding, therefore question arises about the quality of attachment in infants with CHD. According to S. Goldberg study (et al. 1991) there are significantly fewer infants with CHD than healthy controls that are considered to have secure relationships with their mothers. There is no relationship between the quality of infant-mother relationship and mothers' well-being.

Marital satisfaction and general family system functioning. The ongoing stress faced by the parents and siblings of an infant with CHD may have important implications for the functioning of the family system. E. Berant and M. Mikulincer et al. (2003) examined the contribution of illness severity and attachment style to marital satisfaction among mothers of CHD infants. The findings clearly indicated that the severity of the infant's CHD and mothers' attachment style contributed to their marital satisfaction during the infant's first year of life. The more severe the infant's CHD and the higher the mother's attachment anxiety and attachment avoidance, the lower reported marital satisfaction. Maternal avoidant attachment at the time of infant's diagnosis was also the best predictor of deterioration in the mothers' marital satisfaction over the 7-year period, especially in a subgroup of women whose children had severe CHD.

In J. Wray and L. Maynard (2005) study 53 % of parents of children with congenital or acquired cardiac disease reported that there was no change in their relationship with a partner, whereas 37 % of them rated their relationship as more positive. Authors conclude that under the cardiac condition the family relationships remain stable or improve in nine out of ten families. They also suggest that the cardiac condition affects the siblings.

Studies suggest that parents of children with CHD struggle with specific caregiving demands, but also with significant uncertainty regarding their child's future and heightened levels of vigilance regarding their children's ongoing health status. Studies so far do not allow to build the conclusive model of the family system functioning in the situation of CHD. For example Svavarsdottir, McCubbin (1996), Lobo (1992), Berant, Mikulincer et al. (2003) studies seem to support the notion that CHD is a major challenge and significant burden for each parent and family relationship as well, yet other

studies (Wray, Maynard, 2005) suggest that under the cardiac condition the family relationships remain stable or improve.

Satisfaction with care among parents of children with CHD

Studies on satisfaction with care among parents of children with CHD offer a possibility to recognize their needs and evaluate quality of health care from patients perspective. According to metaanalysis conducted by S. Lawoko (2007) there are several domains of health care that parents consider important: medical care quality, information about the ill child, supportiveness of the staff and participation in care and decision making. The literature on parental satisfaction seems inconsistent. Most parents of children with CHD express high satisfaction with care in general or when compared to parents of children with non-cardiac diseases. However, an important proportion of parents (18–36 %) reports that they do not receive adequate information about the child's condition, treatment and prognosis. There is an agreement that parents' psychological distress, insufficient information and social support, financial burden and younger child's age are associated with poor satisfaction however, the causality of this relationship remains controversial (Lawoko, 2007).

S. Lawoko and J. Soares (2004) conducted a study among over 1 000 Swedish parents of children with CHD compared with those with non-cardiac diseases and healthy children. They confirmed that relation between parental distress and poor satisfaction with care is mediated by availability of information about the child's condition. Thus, psychoeducation and parental participation in care and decision making may reduce their anxiety and increase satisfaction. Authors revealed also that poor satisfaction with care is more often reported by parents of younger children and those with limited social networks (social isolation). They explain that parents of younger children need time to acquire information about the illness and develop coping strategies and self-efficacy. Parents who feel isolated may have poorer communication skills and more problems with gaining information and support from the staff, which results in more misunderstandings.

Conclusions

In this section, methodological and other limitations of reviewed studies are discussed. Based on the previous findings and discussion, guidelines for future research are proposed.

Most of the previous studies about family functioning is based on data gathered from mothers of children with CHD, without bringing to light perspective of fathers. Predominance of mothers' self-reports in literature on psychological functioning of parents of children with CHD puts several limitations to our knowledge about its determinants. There is general agreement between researchers that self-reports from a single family member do not allow to draw conclusions about functioning of whole family system (Drotar, 1997). With limited use of other measures of parental functioning (e.g. assessing fathers' perspective, parent-child and family interactions) we may overvalue relationships between individual, social and family variables which influence adaptation to child's chronic illness.

Despite the growing literature on the subject there are some aspects of parental functioning that we know very little about. Although specific demands due to child's medical condition were examined (Svavarsdottir, McCubbin, 1996) there is no relevant studies addressing the transition to parenthood in this conditions. Research on attachment shows that mother-child separation and the risk of losing a child associated with disease and medical treatment of the infant may cause specific difficulties in mother-infant bonding (Feldman et al., 1999). What is more, there are several studies which indicate that CHD may influence the quality of mother-infant interactions. For example, parent-infant interaction during feeding may be less rewarding for mothers of children with CHD than in parents of healthy children (Lobo, 1992). These findings support the need for more information about the quality of parent-infant relationship in families touched by this specific illness.

Another potentially important direction of research is examining the role of "secure attachment" in process of recovery of infant. The results of S. Goldberg (1991) study suggest that secure attachment in children with CHD is associated with subsequent improvement in health. This line of study could also be focused on behavior of parents building this kind of protective factor securing children in process of healing, bringing practical implications for psychosocial interventions addressed towards family.

Few studies focus on changes in relationship between parents after the child's birth and on factors that influence the quality of marriage in positive and negative way (what is explored most often is the level of marital satisfaction). Despite great interest in perceived social support as a factor that facilitates parental adaptation, little is known about exactly what kinds of support parents find important; there is also no research on negative aspects of social support. Finally, parental stress and coping should be taken into consideration. Most studies that examine coping strategies are based on R. Lazarus and S. Folkman model (1984, in: Mussatto, 2006) where the strategies focused on changing the inner state of the parent (e.g. emotions) are seen as less adaptive than direct problem solving strategies. The question arises what are the adaptive coping strategies for parents who face child's CHD, a major and uncontrollable stressor. According to E. Band and J. Weisz concept of primary and secondary control (1988), optimal adjustment to relatively uncontrollable stressors (e.g. medical procedures) may require adjusting oneself to the situation rather than trying to alter stressors themselves (Weisz et al., 1994). Thus, palliative and emotion-focused coping may be considered as an adaptive strategy for dealing with uncontrollable stressor such as life-threatening illness. Probably the use of different methods to measure coping in further studies could shed more light on strategies used by parents of children with CHD.

The infants with CHD are a very heterogeneous group. For example, depending on the type of defect their treatment involves none to several surgical interventions and therefore the duration of hospitalization varies greatly (Berant, Mikulincer et al., 2003). We suggest that there is a need to control variables associated with the severity of the treatment. Physicians' assessment alone does not seem to be fully sufficient.

Findings of the studies on psychological functioning of parents of children with CHD are sensitive to cultural differences such as quality of medical care. Conclusions from reviewed studies are limited to developed countries. In these countries focus has been moved from effort to decrease post-operative mortality to now improving quality of life. While 90 % of children across the world does not have access to basic congenital cardiac care (Tchervenkov et al., 2008). Different countries and even particular hospitals may differ vastly regarding important aspects of medical care addressed towards families of children with CHD.

There is insufficient knowledge about differences and similarities between parents of children with CHD and other diseases, because of the small number of studies with control groups. Comparing families affected with different chronic conditions would allow us to examine whether experiences and adaptation are determined to greater extent by general factors (e.g. fear of medical procedures) or by illness-specific variables (e.g. cardiac surgery) (Lemanek, 1994). When children with non-cardiac conditions are treated as one homogenous control group, those effects might be lost.

Finally, in further studies there is a strong need to determine more precisely what are the individual differences in parents' psychological functioning and how many of them need professional support when coping with their child's disease. Identifying families with difficulties is vital, but we also need to recognize those factors that promote resiliency and good adaptation (Wray, Maynard, 2005). Little is known about long-term effects of having a child with CHD for parents. Research findings remain contradictory, with some indicating prolonged psychosocial morbidity and some reporting more optimistic outcomes. Where longitudinal studies are concerned, we need projects extending over more than one year period.

Practical implications

Studies indicates that parents of children with CHD might experience significant depression, anxiety, somatization and hopelessness symptoms (Lawoko, Soares, 2006). To prevent the development of psychopathology – especially in mothers – it seems to be important to diagnose mental health of parents and provide psychological help to those who meet the criteria of poor psychological adjustment. Studies (Lawoko, 2007, Lawoko, Soares, 2006, Lobo, 1992, Goldberg, 1991) point the need for psychosocial interventions aimed to support both parents mental health and mother-infant bonding. Research conducted by C. McCusker et al. (2010) shows that psychosocial interventions have a positive impact on mothers outcomes such as more satisfaction from the feeding practices, reduced maternal anxiety and less pessimistic appraisal of the situation. As limited, social networks are related with poor satisfaction with care (Lawoko, Soares, 2004) but also with poor parents' well being (Lawoko, 2007, Lawoko, Soares, 2006) it also seems to be important to encourage parents to integrate with other parents of children with CHD (support groups, websites and forums for CHD etc.).

Important practical applications provide studies on satisfaction with care (Lawoko, Soares, 2004) which indicates that sufficient information about the child's health, psychoeducation and parental participation in medical care and decision making may reduce their anxiety and increase satisfaction.

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THEORY AND PRACTICE OF EXPERIMENTAL LEARNING OF THE FUTURE PRESCHOOL TEACHERS IN SLOVENIA

Jurka Lepičnik Vodopivec

Abstract

In this contribution, we attempt to answer the question of how experimental learning is implemented in the educational program for future preschool teachers. At the same time, it is important to know that the ideas of experimental learning represent a consequence of searching a closer connection between theory and practice; in particular, in the processes of educating teachers/preschool teachers its beginnings date back to the era of reform pedagogy. In the first part, we will introduce the grounds of the experimental learning of preschool teachers. In the second part, we will present the findings of a survey on implementing the experimental learning in the educational program for future teachers of preschool children. We were interested in the assessment of representation of experimental learning in the undergraduate educational studies from the point-of-view of future preschool teachers, in the assessment of expected knowledge gained during the studies and in the evaluation of expected communication skills during the studies. The contribution reveals new questions about the possibilities of experimental learning of future preschool teachers; such possibilities are necessary so that the appropriate integration of experimental learning would contribute to higher professionalism of preschool teachers.

Key words

Education, experimental learning, preschool teachers.

Introduction

Ideas about experimental learning date back into the era of the school--reform movement. The representatives of this movement, John Dewey and George Kerchensteiner in particular (Gudjons, 1994), attempted to prove a connection between activity, thinking and learning. These questions are also addressed by Jean Piaget, Kurt Lewin and David Kolb, who consider the connection between them, each from his own point-of-view (Marentič-

-Požarnik, 2000). The need for searching a closer connection between theory and practice is reflected in the formation of experimental learning. In recent decades, experimental learning has spread widely and been established in the process of educating teachers and preschool teachers, especially in learning social and communicational skills.

Drawing on the assessment that experimental learning is "a form of learning, which connects a direct experience (experiencing), observation (perception), familiarization (cognition) and handling (action) into one inseparable entity" (Marentič-Požarnik, 2000, 124), we can recognize an interlacing of knowledge, practical handlings and a personal-emotional development in it. The author believes that experimental learning is a cyclic process (here the conflicts between dialectically opposing ways of familiarization are solved), an integrated/holistic adaptation to the world (here the processes of perception, empathy, thinking and operation are being connected into an inseparable entity), and is a process of creating knowledge (because it means a constant transformation of knowledge, notions and ideas). It is also a life-long process, which, as Kolb believes (Marentič-Požarnik, 2000), starts at the time of obtaining knowledge (formal schooling), continues with a specialization of professional or expert knowledge and ends with an integration of this knowledge with wider values and social dimensions.

In addition to traditional learning methods, which include courses and working with a text, in experimental learning, by Walter and Marks (1981), in Marentič-Požarnik (1987, 200), the prevailing learning methods are central and supportive. Central methods of experimental learning are simulations, role-plays, structural assignments; the supportive ones are observation of process, time to think, visualization, project methods, cases studies. The author cites Klippert (1986), who categorizes experimental learning methods by the place of gaining experience. She distinguishes between (school) reality (excursions, project methods, investigating school practice, performances, developing small learning papers and other tools, a pedagogical practical training, etc.) and simulated reality, in which she places simulations, role-plays, etc.

The main goal of educating teachers is, as Marentič-Požarnik (1987) believes (beside knowing the field of expertise), theoretical proficiency in pedagogy, psychology, didactics and other sciences, knowing various methods, techniques, approaches, integration of various tools, etc., as well as training

the teacher to take actions, which are based on a weighted knowledge, or as the author says, "thoughtful handling" If we also add theoretical competence in preschool pedagogy, as well as developmental psychology and methodologies, we can apply the goals of education to the sector of education of preschool teachers. The author believes that thoughtful handling is "the key part of professionalizing teacher's vocational study, because it is a process, which raises the teacher's level from craft to science" (Marentič-Požarnik, 1987, 86). Therefore, a good preschool teacher is the one who promptly analyses gained experiences and learns from them. This represents the condition for his/her flexibility in handling, for decision-making autonomy, for openness for thoughtful handling and creative approach in teaching. Because the preschool teacher's handling and decision-making in the school are being directed by various subjective theories and other cognitions, it is important that these theories are connected and enriched with scientific theories in the process of educating preschool teachers. This is only possible with a planned and a deliberated integration of bonding these theories into methods and organization of education for preschool teachers.

It is indisputable that future preschool teachers cannot develop their own professional knowledge until they are able to be in contact with practice and experience the dynamic, which goes on in the pedagogical process. In Europe and around the world, there are various models of educating teachers and preschool teachers; consequently, the extent and the time disposition of pedagogical practices in study programs vary as well. The practice is organized, either at the end or in the middle of a program, or is (more or less) spaced out as evenly as possible in the second half of the study. Handal and Lauvas (Cvetek, 2000) recognize that in the case of practice being carried out at the end of the program, there is (in time) a noticeable discrepancy between theory and practice. In this case, the pedagogical staff is specialized either in theory or in practice. The communication between the teachers worsens, so that the differences in status begin to increase and the practical part mostly becomes the task of external co-workers and beginners. The authors Pucett, Diffily (2004), Sarancho, Spodek (2002) understand the relationship between the theoretical and the practical part of the programs for educating teachers as dialectic and not as a question of adequate sequence and stress, that pedagogical practice should be included in the study program with a special purpose and with a goal of bridging the gap between theory

and practice. The goals of pedagogical practice include the integration of pedagogical skills, gaining self-confidence, a competence of making contacts and getting to know students or children, learning the preschool teacher's administrative obligations, etc. For most of the students, pedagogical practice also represents a time of dramatic changes and changes of aspects about learning and teaching.

A common thread in various notions of experimental learning can be recognized by emphasizing the individual's direct, active involvement into a typical, everyday life situation, in which he/she gains direct experience or by thinking (reflection) about gained experience. Both components of experimental knowledge, together with the academic knowledge form a model, which is implemented as a reflective model of professional educating of preschool teachers (Cvetek, 2000). The author explains that from a historic point-of-view, it is possible to identify at least three models of professional educating of teachers. This is called the pre-technocratic model, or master model. Its focus is on transferring knowledge from the teacher to a student and the controlling facts as well as routine procedures are extremely important elements. The difference in the technocratic model is in the presence of a sharp boundary between academically educated experts, whose tasks are reduced mostly to exploring activities and between the users of their knowledge in the practice. The technocratic model is followed by a post-technological model of professional education, which is based on the recognition that new realizations constantly transform the existing practice. Its consequence is creating new recognitions, which affect the practice and change it. In these educational conditions, under which theory and practice support and fulfill each other, the importance of professional competence and the skill to use reflection is increasing together with a goal of achieving higher efficiency in practice.

Problem of the research

The higher educational professional program that is implemented at the Faculties of Education in Maribor, Ljubljana and Koper includes a three-year educational program and enables the acquisition of a higher professional education and a Master's degree in preschool education.

In the curriculum for an educator of preschool children, the observational/integrated practice consists of 285 hours or 12.7 % of the whole cur-

riculum. This means that the students of each class spend one day per week at preschool, where they mostly systematically observe, learn and analyze the work in the school. The goal of observational/integrated practice is familiarization with the daily work of a preschool teacher; the approximation of the work and life in the preschool, as directly as possible; getting to know children and familiarization with the practical part; partially or completely independent execution of activities under the supervision of preschool teacher/mentor. The main purpose is also an ongoing assessment, usage of gained theoretical knowledge and a reflection of events in practice. Practice hours are divided between study courses and are implemented as observational exercises, preschool teacher's exemplar performances and performances of students in the preschool. Performances of individual methodologies and seminar papers of integrated practice, which are linked to the direct preschool work, where the student learns the meaning of observational technique, technique of evaluation and documentation, have a special position.

Training students in the preschool is structured and left to the decisions of mentors, as well as with the agreement between teachers and mentors, or on the basis of an agreement between the Faculty of Education and the preschool. In such a designed program, there exists a wish for intertwining and uniting:

➢ Knowledge, which future preschool teachers gain at basic courses, through lessons, seminars, study of literature, etc.
➢ Practical handlings, which they gain through class inspection and performances.
➢ Personal development, which is influenced by various forms of social learning, trainings of social skills and other.

Research Focus

Training students in the preschool is structured and left to the decisions of mentors, as well as with the agreement between teachers and mentors, or on the basis of an agreement between the Faculty of Education and the preschool. In such a designed program, there exists a wish for intertwining and uniting:

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Methodology of Research

General Background of Research

The questions of implementing programs of educating future preschool teachers, which we encounter both in theory and practice, are frequently connected with the professionalism of preschool teacher's expert education.

According to this, we are interested in:
- ➢ The assessment of representation of experimental learning in the high education program Preschool Pedagogy.
- ➢ The assessment of the representation of experimental learning in the undergraduate education from the future preschool teachers' point-of-view.
- ➢ The assessment of expected knowledge gained during studies.
- ➢ The assessment of expected communicational skills during studies.

When analyzing the stated problem and searching for answers to the research questions asked, we rely on the descriptive and comparative method of non-experimental pedagogical research.

Our research is divided into two parts. In the first part, we relied on the method of analysis and synthesis. We were trying to determine if the valid programs of undergraduate education of preschool teachers in Slovenia contain experimental learning of future preschool teachers. In the second part, we first tried to determine the assessment of representation of experimental learning in the programs of undergraduate education of preschool teachers. This was done with descriptive statistics. We were also interested in the assessment of future preschool teachers and focused on which knowledge and skills they gain in the time of their study.

Sample of Research

The representative sample includes 102 students of Preschool Pedagogy at the Faculty of Education at the University of Maribor. The sample includes 36 students of the first year, 32 students of the second year and 34 students

of the third year. The share of interviewed is fairly equal, because the students of the first year represent 35.3 % of all the interviewed, the students of the third year represent 33.3 % of all the interviewed and the students of the second year represent 31.4 % of all the interviewed. Regarding the study year's criterion, it has been estimated that the example is balanced.

Instrument and Procedures

The research took place at the Faculty of Education, University of Maribor in 2010. The data was gathered with a quantitative technique. The questionnaire was prepared on the basis of literature connected with the research problem. After an experimental sounding (on a sample of 21 students, seven from each year), we eliminated the recorded shortcomings and checked the clarity of the instructions and adequacy of the given answers to the particular questions. This was followed by a correction of the questionnaire and its final usage on the representative example. Before the interview, the students were introduced to the purpose of the research. Afterwards, they filled out the questionnaires independently and without guidance. The time for solving was unlimited.

Data analysis

For processing the data, we used a quantitative method. In the first phase of the process, one of the questionnaires was excluded, because it was not correctly complied. The obtained data was processed with the SPSS program. The data was presented as table, together with the reference of absolute (f) and percentage (f%) frequencies. The existence of dependent connections between variables was tested with a χ^2-test. We used Kruskal-Wallis test of differences.

Results of Research

Assessment of the amount of experiential learning in undergraduate study in terms of future preschool teachers

Table 1: Years of study in correlation with the assessment of experiential learning integration in pre-primary education study

Experiential study		Year of study			Total
		1st year	*2nd year*	*3rd year*	
Yes	*f*	13	5	10	28
	f%	36.1%	15.6%	29.4%	27.5%
Partly	*f*	17	19	18	54
	f%	47.2%	59.4%	52.9%	52.9%
No	*f*	5	8	6	19
	f%	13.9%	25.0%	17.6%	18.6%
I don't know	*f*	1	0	0	1
	f%	2.8%	0%	0%	1.0%
Total	f	36	32	34	102
	f%	100%	100%	100%	100%

$$\chi^2 = 6.552$$
$$g = 6$$
$$p = 0.364$$

Even though there was no statistical significance found in the student assessment of experiential learning integration in pre-primary education study (P > 0.05), we can find that from the results seen in Table 2, a majority of all respondents (54.0%) stated that experiential learning is partly included in pre-primary education study. Such an evaluation was made by most students from the 2nd year (59.4%) and slightly less by ones in the 3rd year (52.9%). Therefore, students are mostly not entirely satisfied with the share of experiential learning in pre-primary education study. It is estimated that their opinion is quite realistic because they have been through a year or two of their study, and therefore they had sufficient opportunity for a personal experience of experiential learning. The reasons for their decisions are certainly diverse and it would not be appropriate to speculate on them. However, we can

understand this information as a warning that we should pay more attention to experiential learning integration in these programs when planning new undergraduate programs for preschool teachers for preschool children.

Assessment of expected knowledge and skills of communication, gained by future preschool teachers in their time of study

Table 2: The number (f) and percentage (f%) of students' assessment of gained knowledge and skills of communication, ranked on average marks.

Knowledge and skills of communication		Yes (4)	Partly (3)	No (2)	I don't know (1)	Total	Average mark
Pedagogical-psycho-logical knowledge	f	58	39	5	0	102	3.5196
	f%	56.9 %	38.2 %	4.9 %	0 %	100 %	
Knowledge from individual activity fields	f	60	37	2	3	102	3.5098
	f%	58.8 %	36.3 %	2.0 %	2.9 %	100 %	
Didactical-methodical knowledge	f	55	42	0	5	102	3.4412
	f%	41.2 %	53.9 %	0 %	4.9 %	100 %	
Child communication skills	f	49	41	10	2	102	3.0686
	f%	48.0 %	40.2 %	9.8 %	2.0 %	100 %	
Adult communication skills	f	34	44	21	3	102	2.8529
	f%	33.3 %	43.1 %	20.6 %	2.9 %	100 %	

There are average marks evident from Table 2. According to the marks, the respondents stated that pedagogical-psychological knowledge has gotten the highest marks (3.5196), which is certainly favorable. The respondents estimate that during their studies they gain enough pedagogical-psychological knowledge needed for their future work. The marks of didactical-methodical knowledge and knowledge from activity fields have gotten quite high marks, which is favorable because it indicates that the under-graduate preschool teacher study program gives a firm and solid ground for the later professional preschool teacher development.

The mark of child communication skills (3.0686) is slightly higher than the mark of adult communication skills (2.8529). These results confirm the already-known findings that future preschool teachers are more competent in communication with children than with children's parents. The reasons

for this might be in the pre-graduate study program, which mostly prefers working with children, whereas working with adults (especially parents) is somewhat neglected. This also shows that in the field of lifelong learning we need to pay more attention to those segments of knowledge and skills that obtained a lower average.

Statistically important differences are shown in Table 3, where we were searching for differences among individual statements according to the year of study with Kruskal-Wallis's test.

Table 3: The result of Kruskal-Wallis test of differences among statements from T1 to T5 according to the year of study

Knowledge and skills	Year	$\overline{R}$	χ^2	g	P
Pedagogical-psycho-logical knowledge	First	66.76	19.995	2	**0.000**
	Second	45.53			
	Third	40.96			
Knowledge from individual activity fields	First	49.18	1.189	2	**0.552**
	Second	49.98			
	Third	55.38			
Didactical-methodical knowledge	First	62.26	11.553	2	**0.003**
	Second	40.92			
	Third	50.06			
Child communication skills	First	56.08	1.629	2	**0.443**
	Second	48.70			
	Third	49.28			
Adult communication skills	First	51.97	0.267	2	**0.875**
	Second	53.00			
	Third	49.59			

As evident from the table, there are statistically important differences according to the year of study, with regards to pedagogical-psychological and didactical-methodical knowledge. First-year students gain most of the pedagogical-psychological knowledge, followed by second- and third-year students. This is completely understandable, since most of the basic pedagogical-psychological subjects are in the first year of undergraduate study. In terms of didactical-methodical knowledge, we can estimate that respondents in the first

year of study find that segment more important than the ones in second and third year, even though the third-year students find it more important than second-year students do. The difference among the statements of students in different year's studies can come from the fact that first-year students are full of various, sometimes even entirely unreal expectations about their studies and their future profession. In the second year, after confronting study, these expectations slowly calm down and build up again in third year, when students are approaching the end of study and when they are preparing for their professional career.

Discussion

By analyzing the valid curricula, we came to a conclusion that the higher education study program Preschool education enables pursuit of academic (44.45 % hours) as well as experiential (55.55 % hours) knowledge. We can conclude that from this perspective the program is balanced. Future preschool teachers are pursuing experiential knowledge through seminar work, laboratory exercises and integrated and synoptic pedagogical practical training with performances. Integrated pedagogical practical training in the valid curricula represents 285 hours or 12.7 % of all the curricula and occurs from the first to the third year's study throughout every study period, one day per week in every year's study.

Study situations are, in terms of the stated curricula, planned in such a way that they enable students to move from an abstract conceptualization, such as comprehension of concepts, regularities and theories through active experimentation and concrete experience, to a reflective observation. Lectures in which the realization of cyclic learning or Kolb's learning process begins (Marentič-Požarnik, 1987) in the 1st year's study can be continued by active experimentation and a concrete experience, which is realized by student's integrated pedagogical practical training in preschool and reflective observation, which is partly realized in preschool, where the student and mentor evaluate work and at the faculty, where students introduce their experience to other students and professors/lecturers. In this way, all four activities of Kolb's model of cyclic learning are intertwined. That is how a student can check his/her theoretical knowledge in each time in life-situations: by having knowledge of children, their specificities, their likeness and diversity, which he/she has gained at lectures, seminars, by studying literature, in professional

dialogue etc. Experiential learning helps the student supplement and extend the theoretical knowledge he or she acquired at lectures, by studying pedagogical literature, by checking the noticed activities, reflections and feelings of children in theory. Such planned pedagogical practical training offers the student the simplest way to connect his/her acquired theoretical knowledge with practical experience as well as linking and checking the theory in practice and vice-versa, to connect practical experience and comprehension to theoretical knowledge. It is clear that the theory will be more comprehensible if it is connected with practice and that the practice will have a greater value if it is confirmed by theory.

Furthermore, the pedagogical practical training enables a student to gain practical experience. It is a pedagogical regularity by which a person learns something best when he or she is active. Students learn childcare by childcare. Therefore, they learn from their own experience, which they can gain only with their own activities. Integrated pedagogical practical training also offers a student a chance to check his/her own preparedness for work at the beginning of study. By working independently in the department, students can comprehend and check themselves, their feelings, capabilities and interests. At the same time, they can find their own skills of coordination and direction of a group of children, making contacts with children, colleagues, parents and others and by doing so, becoming aware of the fields in which more professional study will be necessary. Such a planned pedagogical practical training offers students significant learning (where students develop insight into emotional and psycho-motorical fields of their personalities, where study is connected with concrete life situations, where loose interpersonal relations prevail, and where students can search for information needed to solve a certain problem independently (Marentič-Požarnik, 1987). At this point, we are confronted with the question of how students and mentors experience the integrated pedagogical practical training, i.e. whether they experience it as a possibility to develop the stated viewpoints of a student's personality in which there are enough possibilities for learning with a concrete everyday situation or whether there are loose interpersonal relations under those conditions.

In terms of professional preschool teacher education models, we can find that we are one step forward from a technological model and almost in the post-technological model of preschool teacher education. In our opinion,

there is still a lot of work needed to reach this level, especially in the field of closer connection among individual subjects and pedagogical training, which we understand as a possibility to gain spontaneous and planned experience in the overall time of study, and especially the experience gained during the integrated and combined training. This way, the connection between theory and practice will go in both ways and become dialectical, and the future preschool teachers will be qualified for a critical analysis and well-considered actions in practice. Practical experience gained this way serves future preschool teachers as groundwork for criticism and supplementation of already gained theoretical knowledge.

Conclusions

We have discovered that there are early methods of experiential learning appearing in the educational programs, which lose their character due to their lack of structure. We find attempts of experiential learning in current preschool education programs, although the execution of the entire cycle is questionable.

The data shows that students have mostly realistic expectations, since it is impossible for a preschool teacher to gain all the knowledge and skills needed to perform her/his professional duties in her/his time of study. Scientific and technological progress is a cause of knowledge becoming rapidly outdated, which is why education is a necessity. Students are obviously well aware of that. However, they still want the preschool teacher study program to include more experiential learning; only 27.5 % of students believe that there is absolutely enough of experiential learning. The pedagogical practical training, performances, roll playing, simulations and mini-performances are methods of experiential learning, which enable students to learn through their own experience by their own actions and activities. Experiential learning is not only designed for connecting theory with practice but also for professional socialization, checking professional orientation, discovering the professional qualification for independent work, gaining self-confidence, training of pedagogical skills, making acquaintance with professional reality etc.

We used the questionnaire survey to ask students about their expectations in gaining knowledge (didactical-methodical and pedagogical-psychological knowledge and knowledge from individual activity fields) as well as child and adult communication skills. By analyzing the data, we found that students

mostly expect that they will totally or at least partly gain knowledge and skills. According to the evaluation of gained knowledge, it is agreed that students gain enough pedagogical-psychological knowledge for their profession during their studies. Regarding adult communication, there have been slightly lower expectations stated, which might be the consequence of the preschool education program not having special subjects that focus on gaining and developing the mentioned skills. We can estimate that students will strengthen their competence in these fields during their future professional development.

In order to deal with the pedagogical practical training of future preschool teachers as an important possibility for experiential learning, we will have to reconsider the possibilities of closer connection among teachers, mentors and students in the entire process of pedagogical practical training (before, during and after its realization), because it unites the possibilities for a student's first contact with nursery school life, for checking theoretical knowledge in practice and vice-versa, for possibilities of connecting theory and practice, for experiential learning and gaining practical experience and for checking one's own qualification for working in preschool in each case.

Can we expect future preschool teachers to become reflective practitioners? The answer to this question is complex and extensive, because it is about connecting knowledge, practical questions and personality development into an inseparable integrity. In order to produce a planned and progressive awareness of future preschool teachers with the components of their existing subjective theories of teaching, learning, upbringing, relations among preschool teachers, children and parents, discovering discrepancies and illogicalities in the existing treatments and encouraging the connection of these theories with the existing objective theoretical comprehension in the existing and new education programs for future preschool teachers, we will have to dedicate more time to encourage a systematical retrieval or reconstruction of past experience and create conditions for gaining new experience at the faculty and in preschool. To this end, an even more consistent following of the realization of mutual connection of subjects as well as connecting those to pedagogical practical training as we understand it, as Marentič-Požarnik stated (1987) in a double/binary sense, i.e. as spontaneous or induced experience, gained during integrated and combined pedagogical practical training. Here it is important to preserve the connection between theory and practice, that the connection is bilateral and dialectic. In this process, the future preschool

teacher is qualified for a critical analysis of his/her work and for a well-considered practical treatment. Practical experience serves as a foundation for development of one's own criticism towards theoretical knowledge and as a possibility for their completion.

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QUALITY OF LIFE INDICATORS IN VISIONS OF ADOLESCENTS

Jitka Šimíčková-Čížková

Abstract

Our study focuses on application of the SEIQoL Method for investigating perceptions of quality of life by learners attending lower secondary schools. Our results indicate that the method mentioned above corresponds to the level of thinking of older learners (14–15 years of age). Younger learners (11–12 years of age) consider difficult to imagine their future and to generalize what they perceive as important in their lives. The structure of quality of life indicators corresponds to the age of respondents, and is also influenced by the urban or rural environment, in which the adolescents live.

Key words

Quality of Life, SEIQoL Method, Adolescents, Quality of Life Indicators.

Introduction

Reflections on quality of life are closely connected with opinion on satisfaction with our life. The World Health Organization (WHO) formulates the quality of life in the following way: "...Quality of life refers to subjective evaluation which is embedded in certain cultural, social and environmental contexts." (2004) Quality of life usually connects two components, i.e. subjective and objective one. An objective perception of quality of life can be identified by standard of living and physical health, subjectively perceived quality of life is identified with personal expectations. An important role in quality of life perception is played by individuals' conceptions of their own personalities and of their own lives and through their assertion within them.

From social scientists' point of view, most research is focused on investigations among the adult population. Interest in quality of life viewed by children and adolescents has become more and more an important theme only recently. Its difficulty is especially the creation and use of diagnostic tools. J. Mareš and his colleagues (2006, 2007, 2008) investigate newly developed problems of children's quality of life diagnostics. They combine collection of empirical data with qualitatively focused investigation and apply quality of life diagnostics also to this age group.

Our investigation must address the question of whether it is possible to use subjective questionnaires methods of the SEIQoL also for adolescents' population. The method does not establish criteria in advance but judges from respondents' opinions what they consider to be important in their lives. The method basis is a structured interview in which respondents reflect on things they expect from their lives. They define five life goals to a preparatory schedule and they numerically mark their importance (in percents). Our study tries to verify what testified value the method has for recognition of adolescents' quality of life.

Research question, methods of investigation and examined sample

While outlining the research question we consider that the theme of quality of life is quite distant for adolescences. So we let them reflect on what they find important and what they are afraid of in their lives, what can influence their lives in a positive way or, on the contrary, negatively according to their opinion. For questions quantification we used the schedule from the SEIQoL (Schedule for the Evaluation of Individual Quality of Life) method used by O'Boyle, McGee and Joyce (1994). The schedule is applied twice. In the first case they record five wishes they want to achieve in their lives. In the second case they record five worries from unpleasant life situations that might influence their lives negatively. Every respondent determinates the order of importance for every wish and worry. It is important that the file is 100% complete. This method requires direct contact with the questioner in order that a respondent can ask questions during recording. In this way they can ensure they work in accordance with the task.

The data collection was made by a method of accessible sample for pupils of the 6th and 9th grades at two lower secondary schools. It dealt with a sample of children who were either at the beginning or in the process of adolescence when they start thinking about their life goals and they begin to conceive of what sort of difficulties they might have to confront. Children of this age start imagining their future life and start to address the concrete fears from possible dangers they might be forced to face.

The researched sample consisted of 124 respondents aged from 11 to 16 years. A minor part of the sample included was created by 40 pupils who attended a village school (Albrechtice). A major part of the sample consisted of 84 pupils who attended a school in a town (Havířov). The investigation was

realised in June 2010 before the end of the school year. It had the character of Brains Trust. It used a schedule adapted from the one offered by the SEIQoL method. The pupils did not face any time pressure.

Tab. 1: Sample Rate according to Age and Sex

School	11–12 years old	14–15 years old		Sex		
	6th Grade	9th Grade	Total	Boys	Girls	Total
Rural	19	21	40	22	18	40
Urban	39	45	84	49	35	84
Total	58	66	124	71	53	124

Results and discussion

The outcomes were processed by means of descriptive statistics. Criteria Importance – indicators dealing with life wishes or on the contrary with degree of worries from unpleasant situations were expressed by respondents in percentages so that it corresponds to the SEIQoL method used. However, in the case of statistic processing we used an absolute rate only so that it enabled easier orientation in the amount of various data. For an overview of the criteria we worked with, we publish the following table (Table no. 2).

The structure of indicators composition corresponds to respondents' age. They reckon "love" the most important value for the life of good quality and "death" as the most threatening possibility to the realisation of their wishes. "Family" is another positive and also negative indicator, i.e. in the sense of life mainstay or of its disturbance ("accident in a family", "divorce", "homelessness", and "parentlessness"). The third most important indicator is work "good job", "bad job", "money", "out of cash") that is connected to money and quality of life stability. The material criteria follow ("family house", "car"). Adolescents also consider importance of education in connection with work in positive and as well in negative consequences ("without education") for the quality of life.

For recognition of criteria consideration between the parts of the sample represented by younger (6th grade) and older (9th grade) pupils and place of living (rural and urban school) we used the statistic text χ^2 at d. f. 1. The results are shown in the Table no. 3 and Table no. 4.

Tab. 2: Quality of Life Indicators

Positive Indicators (Wishes – what I wish)	Frequency Rate	Negative Indicators (What I am afraid of)	Frequency Rate
Love	75	Death	82
Family	73	Illness	51
Good Job	61	Bad, No Job	34
Health	53	Accident in Family	32
Money	52	Old Age	29
Education	34	Without Education, Stress from School	28
Family House	33	Lack of Success	24
Possession (car, plane, mobile...)	31	Homelessness	24
Friends	25	War	24
Good luck, happiness	22	Fear from animals	23
Animal	15	Out of cash	22
Sport, nice body, muscles	14	Accident	22
Success	13	Addictive Drugs	19
Hobbies	10	Divorce	15
Achieve One's Dream	7	Loneliness (Loveless)	13
Travel	5	Betrayal, Disappointment	11
High Marks	3	Bullying, Mocking	11
		Friendlessness	8
		Parentlessness	8
		Mugging, Robbery	7
		Prison	6

Tab. 3: Quality of Life Indicators in Connection with Respondents' Age – Positive Aspects

Wishes	χ^2	P	For grade
Family House	44.21	P < 0.01	6th grade
Good Job	12.51	P < 0.01	6th grade
Car	8.35	P < 0.01	6th grade
Love	6.79	P < 0.01	9th grade
Health	28.45	P < 0.01	9th grade
Money	38.23	P < 0.01	9th grade

Tab. 4: Quality of Life Indicators in Connection with Respondents' Age – Negative Aspects

Worries	χ^2	P	For grade
Illness	17.9	P < 0.01	9th grade
Accidents	24.09	P < 0.01	6th grade
War	54.69	P < 0.01	6th grade
Accident in Family	18.91	P < 0.01	9th grade
Lack of Success in Job	20.18	P < 0.01	9th grade

The comparison of all life wishes and fears among pupils of 6th and 9th grades of the tested lower secondary school χ^2 does not show any connection between the monitored and theoretical divisions. From the overview of the results of important indicators of quality of life stated above it can be concluded that older pupils who are at the age when they decide on their future life orientation and perceive the importance of interpersonal relationships that are represented here especially by love. They rate relationships above the material criteria of quality of life, i.e. like a family house, a car or money, which are rated higher by pupils from 6th grade at the beginning of the adolescence.

The older adolescents have concrete life fears connected with illness, accident in family and lack of success. The last indicator is often in the context of job or education. The younger respondents express their fears more about extraordinary events such as accidents or wars. (Indicators overview is stated in Tables no. 5 and 6)

Tab. 5: Quality of Life Indicators in Connection with School Location – Positive Aspects

Wishes	χ^2	P	Place
Good Job	8.64	P < 0.01	Urban
Car	18.22	P < 0.01	Rural
Love	4.16	P < 0.05	Urban
Career	13.57	P < 0.05	Urban
Good Luck, Happiness	11.35	P < 0.01	Rural
Money	13.35	P < 0.01	Urban

Tab. 6: Quality of Life Indicators in Connection with School Location – Negative Aspects

Worries	χ^2	P	Place
Spiders	25.65	P < 0.01	Urban
Homelessness	9.20	P < 0.01	Rural
Drugs	7.15	P < 0.01	Rural
Death	5.11	P < 0.01	Urban
Illness	4.73	P < 0.05	Rural
Disappointment	7.19	P < 0.01	Rural
Accident	3.67	P < 0.05	Urban
Accident	8.43	P < 0.01	Urban

The presented data show that adolescents from the rural school highlight the importance of "car" and "happiness" as a criterion of quality of life. For the respondents from the urban school, "good job", "love", "career" and "money" are more important aspects. Apart from the relationship criterion of "love", it is obvious that the adolescents from the urban environment are more oriented to a good position at work where they can see their personal appreciation in contrast to the adolescents from rural school.

Differences between the urban and rural environments are evident in the area of fears – "fear of spiders" for the urban respondents in contrast to "homelessness", "drugs" and "disappointment" from other people that are fears of the rural adolescents. All the fears might be interpreted as something that the adolescents have low experience with. As a consequence this might increase their feeling of endangerment. The pupils from the rural school cannot imagine the loss of home. They usually feel secure in their own house. A similar fear concerns drugs. They know their effects from the media, where they may be usually over-dramatised. Disappointment from other people might also influence them more intensively because the number of contacts that may provide mainstay and understanding is in a smaller community scarcer than in a the urban environment. The stated criteria of the adolescents from the rural school might be connected to relatively stable material and social relations within the rural community where it is not as easy to obtain "different home" and "different friendships" as it is in municipal environment.

The obtained results enable us to express our opinion on the given research question. The respondents aged from 11 to 16 years are able to work with the subjective questionnaire method of SEIQoL. The results of our investigation by their content provide documentary evidence for differences in quality of life indicators caused by the age and environment where the adolescents live and they can be compared also with the findings of other investigators who have worked with different research methods.

J. Mareš and A. Neusar (2007) used a projective questionnaire for pupils of basic schools aged from 8 to 15 years that dealt with their perceptions of quality of life. The questionnaire consisted of three tasks presented on A4 page, dealing with each task separately and with a graphically limited space for each answer. Children were asked to describe their idea of "bad", "average" and "excellent" life. They connected "bad life" with serious disease, not incomplete family, bad relationship among family members and not enough money. "Average life" was connected with certain defects in relationships, e.g. a divorce in family, arguments, temporary financial problems, while children do not live in beggary and do not complain about their life. "Excellent life" includes especially love of parents, an intact family, a good material background and a lot of friends.

Appreciation health as an important life value is usually neglected by children and adolescents. It is rather considered in relation to the possibility of disease (Škoda, Doulík, Hajerová-Müllerová, 2007). Our results also show that health as a separate criterion is considerably stated by older pupils only.

Quality of life of adolescents was investigated also by T. Svatoš and E. Švarcová in the period from 2006 to 2008. Respondents got 20 pictures on which various suggestions as indicators of life of good quality were stated. A task for every respondent was to select 12 of them which they consider important for definition of "quality of life". After that they selected 6 indicators from every set and determined their order according to their importance. The results in Czech pupils show a preference of the relational attributes to material ones: "having friends", "having age-mates", "having family", "living in nice family environment" and "having good rest".

Finding in all the respondents accent family relationships. Our research has a wider variance of indicators concerning the area of future careers. For this age group this effect is not shown in the quality of life researches made by different methods. Because the SEIQoL method does not establish certain

criteria in advance, it does not limit a scope in which the respondents think and they are free to incorporate more categories that they envisage as defining of life of good quality. However, application of this method is limited by age. Our younger respondents who were aged between 11 and 12 years needed more explanations and confirmations of correctness of their answers. Adolescents aged between 14 and 16 years already have understood the task and they applied the method with greater understanding.

Conclusion

In our study we asked whether it is possible to apply the subjective questionnaire method of the SEIQoL for adolescents. The respondents of our sample were pupils of lower secondary schools aged from 11 to 16 years. We modified the method in the following way: the respondents first recorded their five wishes for the future and then five fears that they might meet in their lives. For every item according to the quality of life indicator they stated numerically (in %) its importance or rate of displeasure. For the data processing we used a statistic test χ^2 at d. f. 1.

The composition of quality of life indicators corresponds to the respondents' age and it is influenced also by the urban or rural environment from which our respondents come from. The older students were more conscious of the importance of health and interpersonal relationships, the younger pupils preferred material values. The respondents from the urban school are more focused on ambitions concerning jobs in contrast to the rural school respondents. The older adolescents are more afraid of illness in the future, the younger ones are more afraid of extraordinary situations. But the rural and urban children have concrete worries of different indicators but what mostly worries them is what they do not have experience with (spiders, drugs, homelessness).

The research results confirm that the use of the SEIQoL method for adolescents is possible. Admittedly, at the beginning of adolescence respondents manage to complete the task but the researcher has to maintain a contact and verbal support while 11 and 12 years old children are completing the questionnaire. Adolescents between 14 and 15 year can think more independently and are better able to generalize their future wishes and life fears that define quality of their life.

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ACTION PLAN OF A TEACHER IN HIS/HER OWN CLASS

Jana Trabalíková

Abstract

This paper informs about the action plan of a teacher in his/her own class. It focuses on one of the possible approaches how to explore the quality of class environment as a factor of the education-formation strategy efficacy in real conditions of a Slovak primary school during the implementation of cooperative teaching. By the means of diagnosing mutual relations among pupils, and the changes in the sociometric structure of groups, it reviews the changes in their prosocial behaviour. It describes the research, which compares by sociometric measures the diagnosable differences in the dynamics of social relations in an experimental and controlled group created by 144 pupils of the 5th year of a primary school. After analysing the acquired data from the sociometric measures, it brings a piece of knowledge that if a teacher at the second grade of primary schools wants to influence the social climate in classes and does not have the support from colleagues, his efforts need not cause an expected effect. Even due to this it emphasizes the fact that if there are to be innovations at our schools, they should be systemic and elaborated, they should be intermingled with all teaching subjects.

Key words

Action research, practical research, sociometry, sociograms, sociometric matrix, socio-preferential relations, social skills.

1 Cooperative strategy and socio-preference relations in a school class

Wardová (1995, p. 460) perceives a teacher as a teaching leader in a class with the strength to help pupils develop qualities, personality relations and professional-working interests, and to help pupils develop their knowledge and emotions with a competence. It is necessary for a teacher to know the information about the social environment in a class. In this connection Wardová identifies the notion of class environment with the term "climate", and calls it a blend of how pupils interact among themselves and with a teacher. The quality of class environment as a factor of the education-formation strategy

efficacy was, in the research activities carried out in the USA, proved to be a precondition for increasing a quality level and amount of learnt teaching load. It was confirmed that the learning with deep understanding appears if pupils and a teacher cooperate together. This mostly appears in a cooperative learning, where a bidirectional and multichannel communication is at the same time being improved.

So, the cooperative teaching has also an influence on one of the components of the social-psychological teaching climate – the communication climate, and it can direct the climate from the nondescript and defensive climate defined by Rosenfeld at the beginning of the 1980s to the supporting one. The Lašek's research (1994, p. 156) based on the sample of 924 students of the third year at secondary schools clearly confirmed the irreplaceable role of a teacher as a creator of the communicative climate in a class. Since it is also Zelina (1996, p. 155), who considers influencing the class climate as one of the primary professional acts of an educator, and in this connection deals with the tactics of a pedagogue participating in its influence, the school climate became a phenomenon for us, which influences the efficacy of the educational process, and is connected with social relations in a class (Fig. 1). In our research, by the means of cooperative tasks, we have deliberately focused on specifically developing the social skills of students, which need to be, according to Siegrist (2001, p. 27), related to a certain content.

**Fig. 1:** Cycle of the cooperative teaching functioning
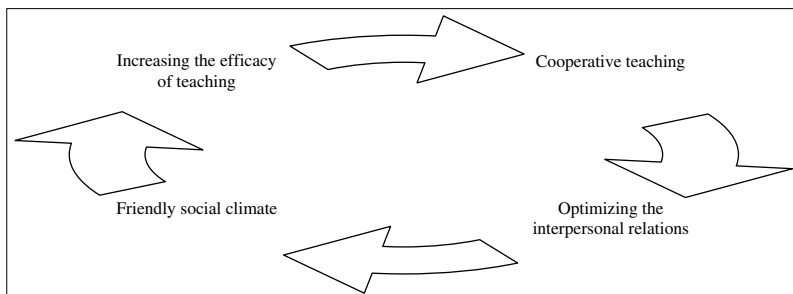
We have carried out a practical research, which is presented by Murphy (1995, p. 469) as a way to help solve problems in a class, support an efficient innovation. In the present times, teachers cannot perceive research as

something belonging to higher education institutions and statisticians. In this way, we have applied the studying of the professional literature in practice, respecting the value of our own participation in the research focused on specific aspects of teaching. The possibility of applying research observations in one's own practice is invaluable.

Seebauer (2005) explains that the perception and evaluation of a certain situation, together with the adequate education strategies of coping with it, needs to be viewed in connection with the factors of the concept of its own, and with a social net of the educated. Švec (1995) defines the three levels of a systemic observation of education: social, institutional and personal one. From the personal point of view where education is considered as a relation among the educating and the educated, leading to the purposive development and self-development of a personality, he emphasizes the present-day non-one-sidedness of personality approaches. It is the self-realization of a man as a main point of education that is being presented in them, however, the man can carry out the self-realization just in a human society, that is not just for his/her own benefit, but also for the benefit of others.

In this sense we stress that by the interaction in cooperative teaching the self-realization of a child is being achieved not just under the influence of a teacher, but also under the influence of a performance related to the rest of a group and acquired feedback. The educator exposes the educated, through the induced cooperative situations, to the educating moments, which lead to accepting responsibility for their own acts. We follow the intentions of the process, which is in case of a child defined by Kosová (2007, p. 44) as "a productive creation of oneself".

Fig. 2: Net of social relations in a traditional and cooperative teaching
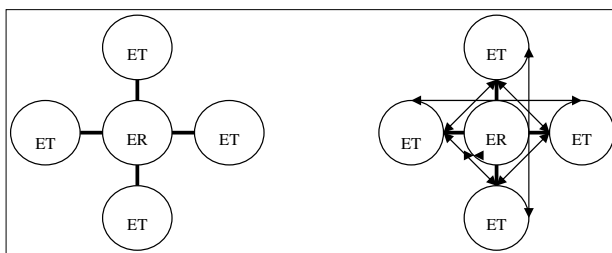
ER – educator, ET – educated

In relation to this, the humanistic pedagogy mentions the teaching "centred by a pupil", i.e. self-organized teaching (Rogers-Freiberg in: Kosová, 2007, p. 47). The social development of a child and an individual choice are linked if such methods are used in which a child is as independently active as possible, but also the methods in which a child has to cooperate with others. On the basis of the sample of 440 pupils at the age of 10–11, Gillies – Ashman (1995) found out that when the pupils worked cooperatively in groups at a lesson three times a week in the period of 6 weeks, they became more compact and inclined to reach a group goal, the more opportunities they had for the collective work. However, the first two meetings were primarily assigned for getting familiar with activities, a group teaching process, practising the active listening to a speaker, how to formulate flexibly and clearly their ideas, how to criticise constructively the others' ideas, how to accept the responsibility for their own behaviour, how to solve problems democratically, how to clarify the differences in ideas, how to try to look at things from the perspective of others, how to rotate, etc. Not dependent on a group composition (from the point of view of abilities, sex), the pupils benefited from the experience of the cooperative work, and learned quickly how to work effectively, they were becoming more sensitive to common needs, and acquired the satisfaction in the progress and the results of cooperative activities. In another study, Gillies – Ashman (1998) found out that in the cooperative work pupils develop not just the ability to share the understanding of questions, but also the understanding towards the unexpressed needs of others in a group. Similar results were brought by Spencer et al. (2008). According to their students, the engagements in the work on projects improved relations among the other participants, and influenced what they thought of others if they set up contacts with people, who were different. They also found out that the students increased the desire to solve conflicts instead of ignoring them.

However, it is necessary to realize that small groups are a self-regulating system. If a conflict between the dynamism of a group and an individual grows, the system becomes stiff (McGeehan et al., 2008). Greer-Jehn-Mannix (2008) point to the negative and long-term impact of the conflicts discovered in the earlier phase of the group functioning. These kinds of conflicts (misunderstandings) lead to a higher appearance of all the other kinds of conflicts during the remaining interaction in a team. In the other types of conflicts concerning the mutual relations in a group or in discussed tasks, this impact was not found. The influence of this limiting factor may be, however, limited

if the members of groups are able to solve the mentioned conflict at the beginning of the work.

In connection to building and growing mutual relations, and maintaining the mental health, social skills are directly related. The life quality of an individual is often dependent on their quality (Johnson-Johnson, 1990). In case of expecting the development of pupils in the area of prosocial and cooperative behaviour, Cohen (1994) points to the significance of a thorough planning and selection of techniques. She points to the fact that the status of a pupil correlates with the interaction in a small group, and vice versa, the interaction has a relation to the achieved knowledge of a pupil.

The sociometric status of an individual is defined in this connection as the signs of the individual evaluated by society. In relation to them, it is presupposed that it is better to have a high position than a low position. Influencing the status of an individual is a process when the status position affects the interaction in such a way that the prestige and value of the group reflect the beginning figure of the status. If a teacher presents cooperative tasks to the group, the status differences based on the level of knowledge are getting active and becoming related to a new situation even if the task does not require knowledge as such. In this situation, the pupils with a higher sociometric status find themselves more competent to solve the task and the same is expected from them by the group. In harmony with the expectations, the prophecy is again being fulfilled in a spell circle; the pupils with a higher level of knowledge are more active than the pupils with a lower level of knowledge. The discrimination of pupils with the lower level of knowledge can be then compared with the discrimination of pupils of other ethnicity, race or gender. That is why, from the point of view of a pedagogue, it is necessary to manage the situation by:

a) Providing tasks requiring different abilities (ability to solve problems, to reason). The members of a group can then perceive that each of them has certain abilities and none of them has all the abilities necessary for the elaboration of a task.
b) Assigning tasks to the pupils with a lower sociometric status. From the point of view of a pedagogue, it is inevitable to diagnose specific qualities, which are characteristic for an individual, and to consider to what extend they are suitable for using them in a group.

Cohen supports an opinion that for the purposes of maximizing the productivity of learning it is necessary to modify the functioning of the status.

It is evident that foreign studies in the present times are not focused on defending the cooperative teaching as a didactic strategy supporting learning, but they deal with the details, which make it more effective. Despite the undeniable benefits, it is absent in a homogenous form in our real school practice, which, in relation to the positive sides of the cooperative strategy of teaching, is just hardly understandable. According to the PISA SK 2006 national report, the acquired performance of our pupils reached just the average in the mathematical and natural sciences literacy. In the area of reading literacy, the acquired result was the lowest one among the European Union countries, under the average of the OECD countries. We also appeared under the average of the OECD countries in the area of solving problems. In the OECD PISA study from 2006, the Slovak education system reached the results comparable with the year 2003. However, the evaluation of these results in the international context became significantly worse in comparison with the OECD average.

Even these findings support the fact that one of the key tasks of pedagogues in the following period should be the exploration of the conditions under which the cooperative teaching will be more effective in our school practice. It is the specific development of social skills, present-day acceptance of other conditions of a successful cooperation–positive mutual dependence, an individual responsibility, face to face interaction, and implementation of feedback that ask for the pedagogues, professionals competent in the area of diagnosing the efficacy of applied didactic strategies.

2 Goal of Research, Research Question, Research Methodology and Research Sample

Goal of Research

By practical research, to diagnose the influences of cooperative teaching on the socio-preference relations among pupils in real conditions at selected Slovak primary schools.

Research Question

Will the use of cooperative teaching at natural history lessons positively influence the social relations of pupils in experimental classes?

Research Methodology

We have applied the following methods:

a) Observing the reciprocity of choices and their analysis,

b) Observing the status structure of the groups of pupils, while applying the Moren sociometric method, recommended by Kollárik (1994, p. 443).

Research Sample

We diagnosed the changes in the socio-preference relations of pupils in an experimental and control group. The experimental group (ES) was formed by 68 pupils of the 5th year (three classes of one primary school), and the control group (KS) by 76 pupils of the 5th year (three classes of a different primary school). There were together 144 pupils. During the first half of a year, in ES, we were applying the cooperative didactic strategies at natural history lessons. The total of lessons in the aforementioned period was 40. Within that, the cooperative strategy was fully applied at 18 lessons (45 %). During the rest of the lessons, we were suitably applying the elements of cooperative teaching.

3 Research Results – Analysis and Interpretation of Sociometric Measuring

We set the sociometric measuring in ES and KS even for three times during the observed period of six months; at the beginning, during and at the end of the intervention. From the point of view of a criterion type of a group members' selection, we chose an instruction defined in the following way, identical in all the three measuring records:

Write the names of classmates:
I would especially like to learn about nature that surrounds us together with:
1..
2..
3..
At the natural history lessons I do not want to work with:
....

Though we did not explicitly define to pupils to place their classmates who they wanted to cooperate with according to order – e.g. on the first place a classmate they wanted to cooperate with the most, the fact that a pupil set

somebody as the first was also taken into consideration, while allocating pupils to groups and cooperative works. By sociometry, we were observing such indicators as the index of positive sociometric status of an individual, index of negative sociometric status of an individual, index of mixed sociometric status of an individual; however, we were also evaluating compactness among the members of a group, the position of the members in it, changes in the position of a group leader... Results were processed in a form of sociometric matrices, sociograms as well as sociometric indices due to the fact that every form of sociometric data processing provides a pedagogue in practice with a source of different information.

3.1 Sociometric Matrices

Besides the fact that the sociometric matrices introduced us into the situation of the sociometric positions of pupils in classes in a particular period, they became a base for further calculations. In this way, the construction of sociometric matrices enabled us to read some elementary data about the position of particular pupils, number of negative choices and class socio-preference structure.

3.2 Sociograms

Although the sociograms of a larger group may seem non-transparent at the first sight, we used them for a faster determination of some data (e.g. number of the mutual choices of members, intensive relations among certain group members, existence of subgroups). They were necessary for a transparent determination of a number of all choices and number of mutual choices in a group. The position of a personality in a subgroup of personal mutual relations is not actually delimited only by its status, but also by its reciprocity and the symmetry of relations with other group members. According to Kolominský (1980), the structure of personal mutual relations consists of two principal variables:

1. Sociometric status of an individual
2. Indicator of its relations' reciprocity that functions in a sociometric choice as a reciprocal choice. The phenomenon of emotional preference sympathy reciprocity and interpersonal attitude, manifested in a mutual choice, can be analysed in two interlinked and at the same time relatively independent views:

    One's own personality aspect – it is characterized by the presence or absence of reciprocity, i.e. a number of reciprocal choices, reciprocal selec-

tion and the stability of reciprocity. These phenomena are considered by Kolominskij as an important characteristic of the state of personality reciprocal choices with other group members.

Group aspect – (it is introduced as a primary one) – it is perceived as a summary expressio-n of reciprocity in a particular group.

We presupposed that after applying cooperative strategies at natural history lessons in experimental classes within solving cooperative tasks, the increase of a number of interactive contacts would be appearing. These facts will be manifested by the increase of a number of reciprocal choices of experimental group members. On contrary, we expected that the dynamism of reciprocal relations would not be so distinct in the control group with prevailing information-receptive education method.

When analysing the entrance, running and output sociogram, we noticed changes in the number of reciprocal choices. Relations' reciprocity contributes to increasing the extent of emotional group members self-feeling, which is to a great extent also manifested in the increase of the satisfaction extent in a group, and the decrease of possible determinants of changes in the structure of reciprocal choices in a group.

We took into consideration the fact that we carried out research in the 5th-year classes during the first six months. In this time, pupils in the experimental group (ES) and also in the control group (KS), after completing the first grade of a primary school, were coming to the second grade of a primary school with a new structure of classmates. They were creating new groups in the class, were forming unwritten class rules, and an overall class climate was formed. That is why we were even more interested in how these facts would be displayed.

All the pupils exploited their opportunity to select three classmates who they were willing to work with and one pupil who they did not want to cooperate with. A significant output for us was represented by an indicator, which determines the percentage of reciprocal choices from the overall number of choices in a particular group. This indicator was labelled for our purposes as ISvv.

$$ISvv = \frac{\text{number of reciprocal choices} \cdot 100}{\text{number of all choices}}$$

Table 1: Reciprocal choices of group members

	Experimental group								
	ES A – 23 pupils			ES B – 23 pupils			ES C – 22 pupils		
	1 ST	2 ST	3 ST	1 ST	2 ST	3 ST	1 ST	2 ST	3 ST
ISvv (%)	23.9	18.2	20.0	25.8	27.4	23.2	29.8	19.0	26.1
Enduring relations	2			4			1		
	Control group								
	KS A – 27 pupils			KS B – 28 pupils			KS C – 21 pupils		
	1 ST	2ST	3 ST	1 ST	2 ST	3 ST	1 ST	2 ST	3 ST
ISvv (%)	20.0	24.3	18.6	20.6	22.2	16.25	23.9	18.9	10.3
Enduring relations	2			1			1		

1 ST – first sociometric test, 2 ST – second sociometric test, 3 ST – third sociometric test, ISvv – percentage of reciprocal choices among the overall number of choices, ES A – experimental group, class A

Table 2: Reciprocal choices in ES

	Experimental group in total		
Number of pupils in total	68		
Sociometric test	1 ST	2 ST	3 ST
Number of all the choices in total	186	191	175
Number of reciprocal choices in total	49	41	40
ISvv (%)	26.3	21.5	22.9

Table 3: Reciprocal choices in KS

	Control group in total		
Number of pupils in total	76		
Sociometric test	1 ST	2 ST	3 ST
Number of all the choices in total	164	208	168
Number of reciprocal choices in total	35	46	27
ISvv (%)	21.3	22.1	16.1

Chart 1: Changes in the ISvv indicator in sociometric tests
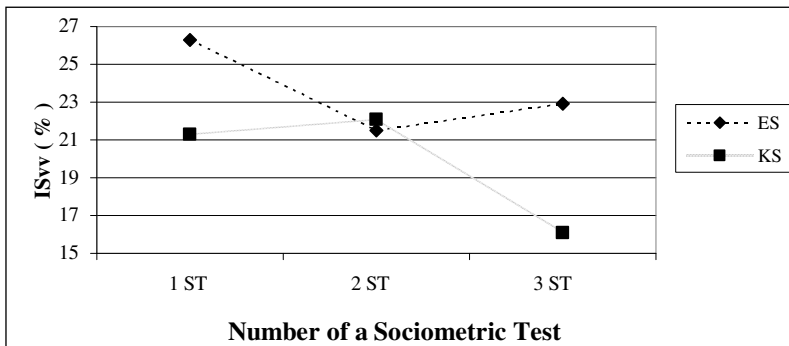
From the above tables 1, 2, 3 and chart 1 it is evident that the initial ISvv figures in ES were already higher than those in KS by 5% in average. This figure in 1 ST in ES A was 23.9 %, in 2 ST decreased to 18.2 %, and in 3 ST increased again to 20.0 %. The initial figure in 1 ST in ES B was 25.8 %, in 2 ST it increased to 27.4 % and in 3 ST it decreased to 23.2 %. The initial figure in 1 ST in ES C was 29.8 %, in 2 ST it decreased to 19.0 % and in 3 ST it increased to 26.1 %.

In two ES classes we noticed a decrease of the ISvv indicator in the continuous sociometric test and its consequent increase in the output socio-metric test. This fact can be understood also in a sense that within the pupils' performance in groups such situations frequently appeared that also caused negative emotions in pupils, disputes, feelings of injustice or of a disagreement. This negative trend is going to be stopped and a positive influence of the cooperative teaching will begin by a long-term influence of cooperative teaching, which orients its focus towards the reflection of group processes and development of social skills of pupils in an increasing way.

To a certain extent, our findings correspond with the opinions of Petrusek (1969), who states that the sociometric status of an individual is closely related to its particular abilities and individual performance. The transmissively oriented school with the performance orientation offers more opportunities to the individuals excelling in logical thinking, mathematical and philological intelligence. Creative pupils, pupils with artistic inclinations, space and musical intelligence have fewer opportunities to develop their abilities. So,

it is possible that these pupils, who seem to be less capable in the intentions of a traditional school, appear more frequently in negative sociometric positions due to a lower individual performance. The cooperative teaching, however, draws pupils' attention also to other personality characteristics of a man as his/her acquired knowledge and particular abilities are. It provides the classmates with an opportunity to get familiar with them in a better way, and it teaches how to appreciate the individuality.

This is even confirmed by our experience in the aforementioned classes. Pupils sensitively perceived that in case of a group work, disputes appeared more frequently, it was necessary to solve more numerous situations; the group work was more demanding for them than they were accustomed to, but at the same time more interesting. These disappointments and embarrassments connected with the cooperative teaching might have been a cause of the decreasing number of mutual choices. By a constant enforcement of positive mutual dependence, individual responsibility and specific formation of social skills, they were gradually realizing the fact that it was necessary to depersonalize, to learn how to solve problems pragmatically, to communicate and know how to appreciate their classmates. We suppose that just these facts were in the end displayed in a repeated increase of an indicator demonstrating the ratio of the overall number of mutual choices and the number of all the choices recorded in 3 ST in two experimental groups.

This trend is also visible in case of viewing experimental groups as one unit (Table 2). ISvv is decreased from 26.3 % to 21.5 % and repeatedly increased to 22.9 %. The aforementioned interpretations are in favour of establishing cooperative pedagogical strategies at different subjects' lessons. With respect to the fact that the ISvv indicator remains on a lower level in the output sociometric test, through observing the reciprocity of choices and their analysis, it is necessary to state that: the use of cooperative teaching at natural history lessons would not considerably positively influence the social relations of pupils in experimental classes.

On the basis of measuring in KS it is clear that the initial ISvv figure in 1 ST in KS A was 20.0 %, in 2 ST it was increased to 24.3 %, and after half a year it decreased to 18.6 % in 3 ST. Similarly in 1 ST in KS B it was 20.6 %, in 2 ST it was increased to 22.2 % and decreased to 19.3 % in 3 ST. Similarly also in 1 ST in KS C it was 23.9 %, it decreased to 18.9 % in 2 ST and in 3 ST it decreased to 10.3 %. The fact that we recorded in two control groups a tem-

porary increase of the ISvv figure and its consequent decrease (which was also manifested in the control group if it is considered as a unit (Table 3)), and the fact that in the third control group this figure was gradually decreasing, are interpreted in such a way that the pupils of control groups, after the initial period of getting familiar with themselves and in an effort to be included into the new class collective, will present a negative change in the structure of mutual choices in a group if they are not motivated to preserve this effort and solve conflicts in a class. By observing the reciprocity of choices in control groups, we came to a conclusion that the social dynamics in them was on one hand considerable, but in the end it was negative.

3.3 Sociometric indices

It deals with a numerical expression of the carried out choices, which were focused on:

a) Observing the signs of a group as a whole, e.g. its compactness, expand-ing...
b) Observing the sociometric status of an individual in a group of pupils at the same age.

After constructing the sociometric matrices and sociograms, the defini-tion of sociometric indices was in the focus of our attention.

We calculated:
1. Individual indices of socio-preference relations expressing the sociometric status of an individual (Janoušek, 1986)

a) ISS – index of the positive sociometric status of an individual,
b) ISSN – index of the negative sociometric status of an individual,
c) ISSZ – index of the mixed sociometric status of an individual.

2. Group index for finding out the sociometric structure of a group (Kerlin-ger, in: Švec, 1998)
   IS – index of compactness.

The aforementioned individual indices of socio-preference relations (be-sides ISSZ) appear in the interval from 0 to 1. ISSZ appears in the interval from +1 to –1. In the course of research, the sociometric measuring was

repeated three times in every class and in case of a need, the composition of the groups of pupils was flexibly changed in the cooperatively working classes on the basis of the measuring results. On the basis of the ISSZ figure received by a pupil, it is possible to assign this pupil a role, which is quite stable if it is not affected (Wardová, 1994). Roles are characterized in the following way: "Stars", or leaders – pupils who are most favoured among classmates.

Unnoticed, or neglected pupils – are usually ignored by other pupils when selecting partners for a game or work. These pupils choose somebody they want to work with, however, they are rarely chosen by other pupils. Their choice is not reciprocal.

Rejected ones (refused ones) – they are not chosen by others on purpose because it is difficult to work with them, or they do not have sufficient abilities for a good game and for finishing, for instance, a project.

Pupils with mutual positive relations create a clique in a class. This little group chooses exclusively other members of the clique. Cliques consist of two or four pupils; they are most often the arrangements of girls.

Isolates (not accepted) – they are separated from others on the basis of their behaviour, personal qualities, or a lack of social competences, or a study success. They can choose from a restricted number of pupils in a group, but they are never chosen by the others.

Individual Indices of Socio-Preference Relations

On the basis of the sociometric matrices and sociograms analysis we interpreted the status structure of personal mutual relations in a group, we were comparing changes in the status structure in the initial (1 ST), continuing (2 ST) and output sociometric test (3 ST). According to the acquired ISSZ level, we classified the group members as: 1. Stars, 2. Preferred, 3. Accepted, 4. Not accepted, 5. Rejected (according to Volková, as she is introduced by Kolominskij (1980)).

Table 4: Clasification of group members on the basis of ISSZ

Sociometric status	Mixed sociometric status figure (ISSZ)	
1. Stars	+0.20	and more
2. Preferred	+0.05	0.19
3. Accepted	–0.04	+0.04
4. Not accepted	–0.05	–0.19
5. Rejected	–0.20	and less

According to the acquired level of the social status, we elaborated a status structure of groups. While defining it, we followed ISSZ – index of the mixed sociometric status of an individual. The figures ISS – index of the positive sociometric status of an individual and ISSN – index of the negative sociometric status of an individual, were used by us as orientation indices throughout the period of experiments. We compared the status structure of groups in ES and KS in the initial, continuing and output sociometric test (1 ST, 2 ST and 3 ST).

Table 5: Status structure in ES and KS in the initial, continuing and output sociometric test (ISSZ 1, ISSZ 2, ISSZ 3)

Sociometric position	Experimental group								
	ES A – 23 pupils			ES B – 23 pupils			ES C – 22 pupils		
	ISSZ 1	ISSZ 2	ISSZ 3	ISSZ 1	ISSZ 2	ISSZ 3	ISSZ 1	ISSZ 2	ISSZ 3
Stars	4	5	3	3	5	4	1	4	2
Preferred	15	12	13	13	11	12	18	15	13
Accepted	2	2	4	3	3	2	1	1	4
Not accepted	2	4	2	4	3	5	1	1	2
Rejected	0	0	1	0	1	0	1	1	1
Sociometric position	Control group								
	KS A – 27 pupils			KS B – 28 pupils			KS C – 21 pupils		
	ISSZ 1	ISSZ 2	ISSZ 3	ISSZ 1	ISSZ 2	ISSZ 3	ISSZ 1	ISSZ 2	ISSZ 3
Stars	0	2	1	2	1	4	4	5	3
Preferred	12	16	12	13	16	12	10	9	10
Accepted	14	7	11	8	8	7	5	4	6
Not accepted	0	1	3	5	1	4	1	2	0
Rejected	1	1	0	0	2	1	1	1	2

The mentioned figures were summarized in the table, which transparently records the changes in the status structure of groups.

Table 6: Status structure of groups in the initial, continuing and output test in ES (1 ST – first sociometric test, ES A – experimental group, class A)

Status position	Group	1 ST	2 ST	3 ST
Positive	ES	21	19	20
Negative	A	2	4	3
Positive	ES	19	19	18
Negative	B	4	4	5
Positive	ES	20	20	19
Negative	C	2	2	3

Table 7: Status structure of groups in the initial, continuing and output test in KS (1 ST – first sociometric test, KS A – control group, class A)

Status position	Group	1 ST	2 ST	3 ST
Positive	KS	26	25	24
Negative	A	1	2	3
Positive	KS	23	25	23
Negative	B	5	3	5
Positive	KS	19	18	19
Negative	C	2	3	2

Table 8: Status structure of groups in the initial, continuing and output test in ES and KS

Group	Status position	1 ST	2 ST	3 ST
ES in total	Positive	60	58	57
	Negative	8	10	11
KS in total	Positive	68	68	66
	Negative	8	8	10

If we assess ES a KS as two units (Table 8), we find out that the number of pupils with a negative sociometric position increases slightly, and the number of pupils with a positive sociometric position decreases in both groups.

We will try to find the answer for a question why the ISSZ figures in KS, but also in ES, were just minimally changed in the second and third sociometric test in comparison with the first sociometric test. This fact surprised us even more because we expected that the changes would also be more distinct in KS. In relation to the fact that the pupils in ES and also KS started at-

tending the fifth grade of a primary school, and they were being included in a new collective, we expected that the process of a group forming would not be possible without conflict situations, the definition of class norms, and just a consequent possible functioning of groups in it, and it would be displayed on the fluctuating figures of the individual indices of socio-preference relations. The tables, however, show that the ISSZ figures were changing in both groups in a minimal way.

The criterion of our sociometric test focused on the choice of classmates a pupil wanted, or did not want to work with at the lessons of natural history. Since the pupils of control groups cooperated at lessons just minimally (if it is possible to speak about any cooperation at all), we suppose that they were choosing the classmates with whom they could be able to form groups capable of succeeding in performance oriented tasks. At the same time, the students in KS did not work on any common tasks, so they did not have any reason to change radically the preference of certain persons, but they were predominantly choosing the same pupils characteristic by an outstanding activity, or outstanding grades.

According to our opinion, all the pupils had an opportunity to succeed in experimental groups within the half a year period of the cooperative teaching implementation. Some pupils were surprised by themselves, by their successful work in a small group. Other pupils skilfully managed the organization of the work in a group, were helpful, cooperating, and the other pupils also noticed, by a constant reflection of groups' performance, what could be appreciated on their effort. While working on cooperative tasks, pupils realized the inevitability of cooperation with the others, and the fact that the result of a group is dependent on a particular result of an individual. The less active pupils and in grades less efficient pupils, encouraged by this fact, many times displayed their outstanding organizing activities in a group. It was many times them who reduced the load of the work in a group, and through their optimism, they arranged a nice atmosphere in working on tasks. They sometimes surprised the others with their creativity and originality of viewing a discussed problem. While reflecting the group efforts, they several times interested the others with their "pragmatic view of" the group work. So, the other pupils could experience them even in situations when their individual abilities were clearly excelling.

However, we also noticed negative reactions. The pupils on their own (not just the teachers) have a problem to change an opinion on another man, if they have already fixed him/her as the one who is silent when being examined, does not answer questions, does not reproduce the taught knowledge, has worse grades. It is in the pedagogical competence and professionalism of a pedagogue to process these situations correctly, e.g. not to overate the performance of pupils, not to stress these uselessly, but to make them visible in a reasonable extent. Otherwise, a pedagogue may cause in other pupils an aversion against these pupils. We presupposed that the influence of the cooperative teaching would be intensive in such an extent that pupils would realize the value of those pupils who had worse grades and, in a traditionally perceived teaching, were not considered successful. On the other hand, during the period of forming groups, creating rules within them (which was manifested quite turbulently in some groups), learning how to communicate and respect the others, we took a difficult road. Our goal was not to look like there were no problems among the members of groups, but to teach pupils how to solve these problems, which is as to the pupils at the age of 10–11 a demanding task for every pedagogue. It was probably this fact that was projected (besides the others) into the reality that the number of pupils with positive status structure was not increased. Since we witnessed the pupils' everyday work on themselves, solutions of many pleasant and unpleasant situations that do not appear in a traditionally perceived teaching, we may say that the ISS figures did not surprise us too much. Our interpretations would rather lead to the fact that if pupils worked actively in groups within the cooperative teaching, the reality that the ISSZ figures were, despite the conflicts, changing is of stimulating importance.

This reality can be also explained by the fact that natural history was the only subject carried out by cooperative teaching for the ES pupils. We suppose that the quantity proportion of traditionally taught lessons (considering at the same time also a lesson ratio of the other subjects in the fifth year) and the lessons with cooperative teaching was not then convenient in a sense of the possibility of causing a change in the pupils' status position. Since we did not want to use cooperative teaching at natural history lessons at any pain, but we used it with a detached perspective where it was possible in relation to the focus of a lesson topic, we consider our plan to influence the status position of pupils as maximally arranged. It may be said that we wanted to

verify in this way whether the application of cooperative teaching in the given extent, to reach this effect indeed, would not be sufficient. We may state that by observing the status structure of pupil groups throughout the experiment duration and by its analysis we stayed that: the use of cooperative teaching at natural history lessons would not considerably positively influence the social relations of pupils in experimental classes.

However, we may state that we did not even notice a change in social relations in KS in a distinctively positive or negative direction. However, on the basis of observing the status structure, it is evident that it is necessary to observe even these conclusions from several perspectives. It is essential to perceive also those tendencies to which the conclusions lead, even if they are not clear.

Group Index of Compactness

IS – index of compactness – it provided us with the information on a situation in a group without determining a direction of choices because it is focused on observing the signs of a group as one unit. With the increasing figure of IS, the group compactness is increased as well.

Table 9: Index of compactness in ES

Figure of IS	Experimental group								
	ES A – 23 pupils			ES B – 23 pupils			ES C – 22 pupils		
	1 ST	2 ST	3ST	1 ST	2 ST	3 ST	1 ST	2 ST	3 ST
	0.063	0.047	0.047	0.063	0.067	0.063	0.074	0.052	0.052

Chart 2: IS changes in the sociometric tests in ES
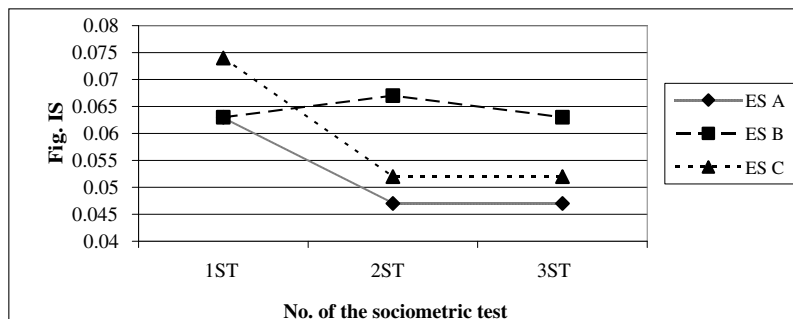
Table 10: Index of compactness in KS

Figure of IS	Control group								
	KS A – 27 pupils			KS B – 28 pupils			KS C – 21 pupils		
	1 ST	2ST	3 ST	1 ST	2 ST	3 ST	1 ST	2 ST	3 ST
	0.031	0.051	0.031	0.034	0.048	0.034	0.052	0.048	0.14

Chart 3: IS changes in sociometric tests
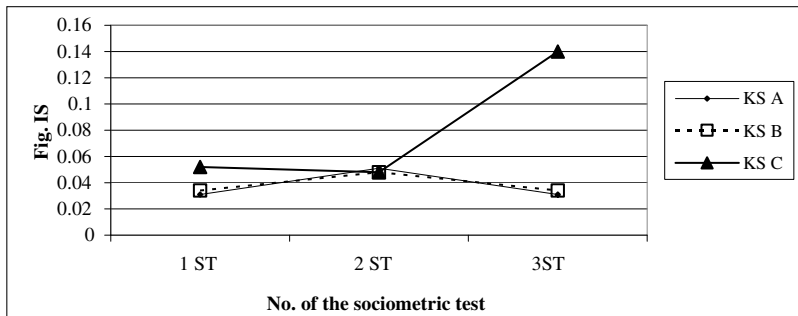
Our interpretations of the IS changes are parallel with the interpretations following from the observation of changes in the ISS, ISSN and ISSZ figures and the observation of the reciprocity of particular members' choices. It is only a purpose of using these figures that may change, and it is especially the index of compactness that provides quick information on a situation in a class. However, it is not sufficient for a deeper analysis of relations in a group.

4 Discussion

Similarly as in case of previous research, the increase of the number of choices in a group was also recorded after applying education dramatics in a school club for children, while applying cooperative approaches by Kovalčíková (2002) and Jablonský (2006), who implemented cooperative teaching at the lessons of ethical education. Kovalčíková (2002) confirmed that the implementation of personal education and social education in a group of pupils through dramatic plays – the intervention with the use of

cooperative and experience oriented pedagogical strategies – evokes changes in the status structure of a group in a positive way because the acceptation and appreciation of the value of pupils are increased. That optimizes in the end the interpersonal relations in a class, creates conditions for suitable social climate and atmosphere as well, and the atmosphere influences the teaching efficacy increase. However, in our research, we were applying the cooperative approach along with educating pupils in the area of natural history, so, we used it as an instrument, not as a goal. According to Wardová (1995), it is crucial to uncover the social structure of a class, to identify the roles being fulfilled by pupils in a class, and to use an opportunity that despite the stability of roles there are possibilities how to affect them. However, a pedagogue must go through a strategy in a thorough way, beginning with the observation of a group's structure, continuing with the perception and evaluation of certain situations, up to the critical analysis of his/her own procedures on the basis of feedback. Saleh – Lazonder-Ton (2005), examining social interactions, found out that the heterogeneous groups increase an extent of individual work, while the homogenous groups lead to a more collaborative work in a relatively more frequent way.

On the basis of our experience with cooperative teaching we state that using cooperative teaching only at the lessons of natural history was not sufficient to reach the influencing of a climate in classes (in the majority of variables). It is significant to realize that if a teacher at the second grade of primary schools wants to influence the social climate in classes and does not have his/her colleagues' support, his/her efforts need not reach an expected effect. We suppose that the quantity proportion of traditionally taught lessons (thinking at the same time about a lesson portion of other subjects for the fifth-year pupils) and the lessons with cooperative teaching was not then positive in a sense of the functioning of a change in the pupils' status position.

That is why we stress that if our schools are supposed to face innovations, they should be systemic and premeditated; they should be intermingled with all the teaching subjects. Otherwise, the introduction of special subjects for teaching social skills to pupils will have no reason. If these skills are not to be integrated into all subjects, they will not be comprehended, and will stay forgotten. It would be needy to consider the presence of a social pedagogue at several schools, for whom general education principles mean a starting point. These are e.g. the principle of respecting a personality, individual approach,

the principle of personality formation in a formation group (Zemančíková, 2009).

We recommend to pedagogues to concentrate on diagnosing the sociometric structure of a class. Under the influence of the presented arguments, we even consider necessary that the research activities should gradually become an obvious part of pedagogical competences.

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EMOTION UNDERSTANDING IN CHILDREN
WITH HEARING IMPAIRMENT

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Abstract

Emotion understanding refers to the ability to recognize, comprehend and infer emotions, which is crucial to the development of social competence and mental health in children with hearing impairment. Researches on understanding emotions in hearing impaired children are introduced and reviewed in this article based on three aspects: recognizing emotion, understanding the cause of emotion, and understanding display rules of emotion. Plausible interpretations are analyzed, and study issues needed to be explored further in the future researches are put forward.

Key words

Emotion understanding, recognizing emotion, understanding the cause of emotion, understanding display rules of emotion.

1   Introduction

Emotion understanding is the ability to take the emotional perspective of another person and infer or estimate others' likely feeling or perception (Harris, 1993; Schwartz & Trabasso, 1984). Izard and Harris (1995) define emotion understanding to be consciously comprehending emotion processing (e.g. emotion state and emotion adjusting) and how emotion works. Saarni et al. (1998) present that emotion understanding is the ability to "understand what others are feeling" in concise terms. Cutting and Dunn (2002) describe emotion understanding as the capacity to comprehend and infer meaning from the actions, goals, and perspectives of other people that are necessary to facilitate meaningful and appropriate social interactions. In a word, emo-

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tion understanding refers to the ability to recognize, comprehend and infer emotions.

Emotion understanding is an important component of social perception in the theory of mind (Tager-Flusber & Sullivan, 2000); it is also considered as a central component of children's social-emotional competence and adjustment (Halberstadt, Denham, & Dunsmore, 2001; Cole et al., 2009). Understanding emotion involves attending to and interpreting the emotional valence of an emotional expression in facial expression, vocal expression, and "situational elicitors of emotion" (Saarni, Mumme, & Campos, 1998). It may have far-reaching consequences for their personal and academic success (Greenberg & Kusche, 1993), also play adaptive role in both intra-psychic regulation and interpersonal interaction, is the major factor in everyday communication (Barrett, 1993). Socially inadequate expression one's own or understanding of other person's emotions can create easily a climate of interpersonal misunderstandings (Rieffe & Terwogt, 2000), and lead to ineffective interactions.

Many researches find that children with hearing impairment have many difficulties in peer relationships and interactions (Nunes et al., 2001; Weisel et al., 2005; Most, 2007). Some researchers claim that children with hearing impairment are detected to have large amount of distrust, stubbornness, and behavioral problems (Vostanis et al., 1997).They are delayed in psychological and social adjustment (Vernon & Greenberg, 1999),and in acquiring the theory of mind (Peterson & Siegal, 2000). These problems might have been closely linked to the difficulties in understanding and expression of emotions in children with hearing impairment.

2   Emotion understanding of children with hearing impairment

In case of hearing impaired children, conclusions of researchers' studies on their understanding emotion are not consistent. Many studies demonstrate that hearing impaired children's capacities to predict basic emotions develop at a much later age than hearing children (Harris et al., 1987). Odom, et al. (1973) found that deaf children have trouble in indentifying and interpreting emotional situations. Dyck et al. (2004) discovered that hearing impaired children's inferior performance on emotion recognition and understanding

tasks reflects delayed acquisition of a broad range of language-mediated abilities. However, Hosie et al. (1998) claimed that despite possible differences in the early socialization of emotion, deaf and hearing children share a common understanding of the emotions conveyed by distinctive facial expressions. Rieffe and Terwogt (2000) found that both deaf and hearing children are capable of correctly predicting typical emotions. Although deaf children did not always come up with accurate emotion predictions immediately, this decreased with age.

Understanding emotion is crucial to the development of social competence and mental health in children with hearing impairment, which should be paid high attention in order to promote development of them. Researches on understanding emotion of children with hearing impairment are introduced and reviewed in this article based on three aspects: recognizing emotion, understanding the cause of emotion, and understanding display rules of emotion. Plausible interpretations are analyzed, and study issues needed to be explored further in the future researches are put forward.

2.1 Recognizing emotion

Recognizing emotion is the basic emotional competence, referring to the capacity of labeling and comprehending emotions in facial expression, indentifying and inferring characters' emotions in various situations. Facial expressions are outward manifestation of the internal emotions, and one can recognize the emotion from others' facial expression. Understanding of emotions in situations refers to recognizing and inferring the emotions of protagonist from certain emotion-arousing situations, which is more difficult than recognizing emotions in facial expression. The perception of emotions in facial expressions and situations is a fundamental aspect of emotion processing, reflecting the basic interpretation of social cues upon which consequent social interactions and behaviors (Pollak et al., 2000).

Odom et al. (1973) asked deaf and hearing children to sort faces portraying nine emotions. Results showed that the deaf children perform as well as hearing children. However, when asking children to match these faces representing emotions with drawing of appropriate emotion-arousing situations, deaf children cannot match faces to the situations as well as hearing children. It indicated that there was no difficulty in recognizing emotions in facial expressions for deaf children; nevertheless, there were much trouble

in identifying and inferring emotions in situations for them. It appeared that deaf children could not analyze and interpret emotion-arousing events adequately. These outcomes are confirmed by several other researches. Bachara et al. (1980) found that deaf children performed less well than hearing participants on tests of emotional understanding, while requiring them to link emotive situations to facial expressions. Song Wenxia et al. (2010) tested the hearing impaired children's external emotion understanding by means of self-established examination. They obtained similar results, showing that the development of hearing children's understanding external emotion including ability of recognizing facial expression is delayed, relative to hearing children. The study by Gray et al. (2007) examined deaf children on the ability to assign the emotions of anger, sadness, fear, surprise and disgust to the characters in simple stories. Results suggested that deaf children have more difficulties to assign emotions to protagonists in the story than hearing children. Nevertheless, the marked improvement in performance by the older deaf children indicates that they had made considerable gains in their emotional understanding with age. In other words, there is a developmental lag in deaf children understands of emotion in the younger deaf children; however, the ability of understanding emotions of deaf children could be improved markedly with age, older deaf children should perform at a similarly high level to hearing children.

However, Hosie et al. (1998) claimed that when tasks do not request linguistic information, children with hearing impairment do well as hearing children. Deaf children and hearing children at same age were tested for their ability to match photographs of facial expressions of emotion, and to produce and comprehend emotion labels for the expressions of happiness, sadness, anger, fear, disgust, and surprise. The results suggest that there are no significant differences between the abilities of deaf and hearing children in recognizing emotions. Deaf children were even more accurate at labeling disgust expression, and also at labeling fear, than hearing children.

For different types of emotions, the abilities of children to indentifying of them are different. Many studies confirmed that hearing children can identify situations that rise to happiness and sadness more easily than those engendering fear or anger (Denham and Couchoud, 1990; Markham and Adams, 1992). Hosie et al. (1998) examined deaf children on the matching, labeling, and comprehension of facial expressions of emotion showed a similar pattern:

for both of deaf children and hearing children, happiness and sadness were the most accurately matched expressions and the most accurately produced and comprehended labels. Anger was the least accurately matched expression and the most poorly comprehended emotion label. Disgust was the least accurately labeled expression. The study of Zheng Pei and Ma Weina (2009) got a similar conclusion: the level of recognizing happiness is significant higher than that of anger and fear for hearing impaired children. Gray et al. (2007) also found that for both of deaf children and hearing children, attribution of emotions to story characters with happiness and sorrow is easier than they did with those depicting other emotions (e.g. disgust, fear, surprise, and anger). Assigning emotions to the story with anger is most difficult.

On the other hand, Odom et al. (1973) found that their deaf children scored best on anger and fear, very much at variance with the pattern in hearing children. It is possibly related to the methodological issues in the experiment, in which participants were 15 deaf children in a residential school, who were compared to normal hearing children in kindergarten and second graders. The small size of the sample of deaf children and the questionable generaliziability of deaf children who are educated in a residential setting are particular concerns (Gray et al., 2007).

Sound playing an important role in the emotional development, which usually taking place in an auditory-linguistic context (Fehr and Exline, 1987). The conversations and communication with others is vital to understand one's own and others' emotions, but the impairment of hearing hamper interactions between children and parents, peers and others (Lederberg and Mobley, 1990); Parents and caregivers are also less likely to give deaf children explanations of their emotions (Vaccari & Marschark, 1997). Hearing impaired children lack opportunities to engage in various interactions with family members, caregivers, and other children that are likely to give rise to spontaneous conversations about emotion. These factors hinder the development of social interaction, abstract thinking, and understanding emotions in hearing impaired children, leading to difficulties in indentifying emotions in facial expressions and situations for them (Odom et al., 1973; Song Wenxia et al., 2010). With increasing of social experience, the capacity to understand emotion would be improved with age, so older deaf children should perform better than younger deaf children in tasks of understanding emotion (Gray et al., 2007). However, Hosie et al. (1998) declared that happiness, sadness,

anger, fear, disgust, and surprise represent emotions for which there exist clear and unambiguous facial expressions, and these facial expressions are displayed within the first year of life by both hearing (Izard et al., 1995) and deaf infants (Snitzer et al., 1990). Moreover, the normal development of the ability to read facial expressions of emotion is only minimally dependent on environmental input and is, therefore, relatively independent of experience. In case of deaf children, their experience which is different from hearing children provides alternative inputs on which deaf children are able to capitalize. So, deaf and hearing children share a common conceptual understanding of the facial expressions, and have similar pattern to comprehension of emotions.

2.2 Understanding the cause of emotion

Children not just recognize others' emotions, but also can infer the cause of emotions, understanding that others' emotions depend on their subjective desires and beliefs. Children are able to accurately predict that protagonist will be happy if he/she receives what he/she desired, and protagonist will be unhappy if he/she is frustrated in fulfilling his/her desire, when children are at age of about 3 (see review of Li Jia & Su Yanjie, 2004).Researchers claim conformably that children's understanding of emotions based desires develop earlier than their understanding of emotions based on beliefs (Harris & Johnson, 1989; Baron-Cohen & Harris, 1998). The results of an experiment showed that children at 3 are not able to understand emotions based on beliefs accurately, few children at 4 and most children at 6 can understand emotions base on beliefs. In other words, children at 4 began to understand the emotions related to beliefs and such capacity developed well when they are aged 6 (Harris & Johnson, 1989). The study of Baron-Cohen (1998) also confirmed this conclusion, indicating that 89.5 % of children aged between 4 to 6 can understand emotions based on desires, and only 73.7 % of children can understand emotions based on beliefs. Additionally, children also appreciate that different people can have different desires and beliefs and others' desires and beliefs can differ from their own (Tang Hong, 1996).

About understanding of emotions based on desires and beliefs, there are little studies for hearing impaired children. Researches focusing on their understanding of the relationship between beliefs and emotions find that the hearing impaired children's ability of understanding emotions based on beliefs delays, compared with hearing children. Steeds et al. (1997) imple-

mented the Smartie experiment, providing deaf children aged 5–12 years (mean 9 years old)with situation in which the protagonist falsely believed that a Smartie box contained Smaties, whereas in actual, the Smartie box contained pencils. Participants were asked to predict how the protagonists felt when he was given the box with not discovering the box's actual content. The result demonstrated that 70 % of participants predicted that the protagonist would be happy when he received the Smartie box. The performance of hearing impaired children at age of 9 years old is compatible to that of hearing children at age of 6 years old, then it can be inferred that hearing impaired children's ability understanding emotions based on beliefs lag behind that of hearing children.

Some researchers state that hearing impaired children understand emotions referring more frequently to desires than hearing children. The research of Rieffe & Terwogt (2000) focused on deaf children's understanding emotions governed by subjective mental states (beliefs and desires), asking deaf and children to explain emotions (happiness, anger, or sadness) felt by characters in various situations. The results showed that while the deaf children made as many as references to mental states as did the hearing children, they tend to neglect causal factors and mention more desires to explain character's emotions than beliefs; their reference to desires largely exceeded those of hearing children, and these desires references among deaf children even increased with age. The study of Reffe et al. (2003) also demonstrated that deaf children tend to concentrate primarily on the fulfillment of desires in their emotion predictions and explanations, whereas they neglect the factors that had led to the negative outcome.

The hearing impaired children's deficits in understanding emotions based on beliefs many be related to their deficits in the theory of mind. Some researches on the theory of mind using standard false beliefs tasks obtain the results: 65 % to 90 % of deaf children at mean age of 10 years old failed in simple false tasks, which were accurately accomplished by hearing children at 5 years old (Peterson & Siegel, 1998; Russell et al., 1998). Rieffe and Terwogt (2000) argued that understanding the subjectivity of desires can be learned nonverbally for deaf children, and they grow up in a mainly hearing society, their time and their communication with others is frequently restricted. Therefore, an economic use of this time seems wise and their frequent references to desires are defensible.

2.3 Understanding display rules of emotion

There is a distinction between real and apparent emotions. People's emotion expressed might not be in accordance with the emotion experienced actually, which is related to the "display rules of emotions". "Display rules of emotions" are recognized as the principles governing whether an emotion should be expressed or concealed (Ekman et al., 1972). During the elementary school years, children develop the awareness of the possible dissociation between, on the one hand, a person's expression (particularly facial expression) of emotion and, on the other, how that person actually feels, such development is important to children's understanding of emotion (Saarni, 1993). Hearing children can use display rules of emotions at early age (3 or 4 years old), inhibiting the expression of emotion in certain social situations: for example, they conceal their disappointment on receiving an undesirable gift (Cole, 1986). Understanding the display rules of emotions is a crucial task for children's socialization, playing a central role in their development of emotion and social competence, facilitating social interactions and self-regulation (Garner & Power, 1996)

The researches on hearing impaired children's understanding the replay rules of emotions are scanty. One research was done by Hosie et al. (2000), which examined deaf children's understanding of display rules by utilizing short stories scenarios in which a protagonist encounters a situation that is likely to demand some form of emotional regulation. The results showed that deaf children's understanding of display rules is broadly on a par with that of hearing children of the same age, particularly when those rules involve self-protection. However, the development of understanding of the strategic function of prosocial display rules in deaf children may be subject to a degree of developmental lag, relative to hearing children. Hosie et al. interpreted that emotion concealment for prosocial reasons, which is to protect others' feeling, requires a relatively sophisticated awareness and understanding of the mental states of other people. Hearing impaired children prefer to communicate with others using sign language not oral language (Hanakova et al., 2011), however most of them communicate in a spoken language context where their interactions are restrictive, that is not benefit for development of understanding others' mental states (Peterson & Siegal, 1995; Russell et al., 1998). Therefore, deaf children's ability to regulate their emotional expression to protect other persons' feelings would be delayed. Evidences suggested

that understanding of emotional display rules in hearing children is at first associated with protection of their own feelings not others' feelings (Zeman & Garber, 1996), and the ability of understanding prosocial rules develops later. It could be inferred that deaf children's understanding emotional rules for prosocial reasons emerge much later; their performances are seen as displaying a pattern which is typical of younger hearing children (Hosie et al., 2000).

Understanding the replay rules of emotions also reflects in the regulation of emotions, especially controlling negative emotions. Therefore, great many studies on children's understanding of display rules have concentrated upon their regulation of negative affective states (Underwood, Coie & Herbsman, 1992; Zeman & Garber, 1996; Zeman & Shipman, 1996); In particular, expressions of anger are discouraged from an early age (Dunn, Bretherton & Munn, 1987); Children learn to mask the expression of their emotions to situational circumstances in according to cultural display rules (Malatesta & Haviland, 1982). For hearing impaired children, studies indicate that deaf children have mask their anger and happiness less frequently than hearing children; Their reasons for masking their true feelings were comparatively self-protective, whereas hearing children provided more reasons that were prosocial or concerned with norm-maintenance (Hosie et al., 2000). Deaf children show more anger than hearing children, and do so in a less constructive way in keep positive peer relationships (Rieffe & Terwogt, 2006).The research of Rieffe and Terwogt (2006) examined how deaf and hearing children would communicate their anger towards peers in conflict situations, using a vignette paradigm. The results suggested that deaf children tend to communicate their anger rather bluntly. Whereas the vast majority of the hearing children made an attempt to explain their displeasure, almost half of the deaf children failed to do so. Moreover, deaf children were more pessimistic about receiving an empathic response than hearing children. Deaf children express anger more bluntly, but their overtly aggressive reactions do not exceed those of their hearing peers, not supporting former studies, manifesting that deaf children show more blunt aggression (Murdock & Lybarger, 1998; VanEldik, 1994). Nonetheless, their reactions to an angering event seemed less beneficial to dealing with the social relationships effectively.

Rieffe & Terwogt (2006) pointed out that deaf children are emotionally less competent than hearing children, such as blunt expression of anger and impaired insight into the outcome of such behaviors, that is associated with

deaf children lacking conversations and communications with others, which give opportunities to learn and practice emotional replay rules. Moreover, "emotional coaching" that parents help children to accept and label their emotions, to recognize and acknowledge emotions in others, and also help their children to develop coping strategies and interpersonal problem solving skills (Gottman & Declaire, 1997), is impoverished to deaf children. Most parents of deaf children talk less about mental states, emotions and their causes, with their deaf children (Vaccari & Marschark, 1997). These factors prevent the deaf children's development of emotional competence and influence their understanding emotional display rules.

3 Conclusions

Several evidences predominantly confirm that the ability of understanding emotion in hearing impaired children is delayed, compared with hearing children, although some researches find their performance in recognizing emotions in facial expression as similar as hearing children((Hosie, et al., 1998). They have trouble in indentifying and interpreting emotional situations (Odom et al., 1973), in understanding external emotion (Song Wenxia et al., 2010), in assigning the emotions to the protagonist in simple stories (Gray et al., 2007). They tend to explain emotions based on desires, not beliefs (Rieffe & Terwogt, 2000; Rieffe et al., 2003), and are delayed in understanding beliefs (Steeds et al., 1997), neglect the factors leading to negative outcome (Rieffe et al., 2003). Furthermore, there is developmental lag in understanding emotional display rules for prosocial reasons of hearing impaired children, relative to hearing children (Hosie et al., 2000). They are not able to regulate negative emotions adequately, expressing anger much bluntly without explaining their displeasure (Rieffe & Terwogt, 2006).

The development of emotion understanding relates closely to social interactions, which provide opportunity to learn and develop ability of understanding and expressing emotions. In hearing impaired children, their hearing impairment hampers spoken language's development, making them unable to communicating with family members, peers and others as smoothly as hearing children. Moreover, sign language which is their preferred communication tool with legislative support and high degree of efficiency for its users

is not presented in sufficient extent (Hanakova et al., 2011). Therefore, they lack abundant opportunities and social experience to learn knowledge about emotions and practice it (Odom et al., 1973; Rieffe & Terwogt, 2006), so that they may not understand, infer others' emotions in some circumstances, or regulate and express their own emotions appropriately. Moreover, Gottman & Declaire (1997) claimed that "emotional coaching" is important to develop the capacities of understanding emotion, emphasizing that parents should help their children gain ability of understanding their own and others' emotions. Nevertheless, in fact, "emotional coaching" to children with hearing impairment is insufficient very much. Their parents seldom talk about emotions with them (Vaccari & Marschark, 1997). In additional, hearing impaired children have difficulties in the theory of mind which is closely associated with emotional competence. Deaf children have difficulties in acknowledging that different people can hold different mental states regarding the same situation (Peterson & Siegel, 1995, 1998; Russell et al., 1998).Their deficits in the theory of mind may account for their delay in understanding emotion in some degree.

The researches on emotion understanding in children with hearing impairment are not affluent, mainly focusing on recognizing emotions in facial expression and situations, inferring the cause of emotions based on desires and beliefs, and understanding emotion replay rules. But seldom studies explore deeply the influencing factors on understanding emotions of hearing impaired children and the underlying working mechanism also is needed to be probed deeply. Additionally, studies on how to improve hearing impaired children ability to understand and regulate emotions are deficient too. Hence, in future researches, the issues on influencing factors and working mechanism on emotion understanding, and improving programs for hearing impaired children should be discussed enough and explored in depth.

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DEVELOPMENT OF SECONDARY EDUCATION IN SLOVAKIA IN THE PERIOD OF THE FIRST CZECHOSLOVAK REPUBLIC FROM THE STAFF'S PERSPECTIVE

Jarmila Zacharová

Abstract

1918 became a breaking point in the history of Europe. New states were formed, Czechoslovakia was also among them. School education became a cultural base for this small state, however, after the long-term assimilating process of the former Hungarian Kingdom, there was a need to Slovakize the school education actively.

This paper examines the area of the development of secondary education in Slovakia with respect to that time legislative changes, extended by a perspective regarding the solution of staff issues as far as the employment of pro-democratic and pro-national oriented teachers at Slovak secondary schools were concerned. Since there were not Slovak teachers in Slovakia at that time, the school administration was solving the given problem by employing teachers and professors from Bohemia and Moravia on the basis of the requirement of the Minister with Full Powers for the Administration of Slovakia, Vavro Šrobár.

Key words

Czechoslovakia, Ministry of Education and National Enlightenment, school unification, school re-organization, network of secondary schools, Slovakization of schools, staff issue, Czech teachers.

Introduction

The establishment of Czechoslovakia in 1918 and the following twenty-year period meant a breaking and even a historically unique epoch for Slovakia, which also became apparent in the area of education. It is a relatively closed area marked on one hand by 1918, when the Czech and Slovak nations joined together, and created a sovereign republic, and on the other one, by 1938 characterized by its disintegration. This historic period, mainly in the development of education and pedagogy in Slovakia, is of unusual signifi-

cance. A special period of the so called Slovakia "training" started when the Czech teachers and pedagogues contributed to the formation and erection of the Slovak education system and pedagogy in a significant way. "In the world, it is a rare example of a nation with the population of almost 3 million to break free from a hundred year long servitude, to remove the oppression consequences, and to find its way on the level of developed European nations. This work was successfully carried out with the help of the Czech intelligentsia" (Pšenák, 1991, p. 210).

Staff Issue

By the disintegration of Austria-Hungary new opportunities to build a new educational system in Czechoslovakia, related to the new state and changed circumstances, were appearing. Even before the creation of the Czechoslovak Republic, the discussion about the birth of new Slovak education had been developed in the Prague National Committee by prominent pedagogues as Jaroslav Vlček, František Drtina, Karol Kálal, Stanislav Klíma, and others. Despite the fact that it was not clear how the war would be finished, in the Czech national circles there was a prevailing opinion regarding the opportunity to found their own schools in Slovakia. Since the possibilities in Slovakia were limited, even the Slovak that time every-day life was signalling that the Slovaks would be dependent on the help of the Czech teachers and professors (SNA, f. A. Štefánek, Card. No. 13, Inv. No. 667, Beginnings of New-Era Education in Slovakia, pp. 1–2).

The life reconstruction in a Slovak way was a difficult and demanding task due to the fact that the efforts of the Magyar ruling classes had been graduating since the 1870s, and culminating at the beginning of the 20th century. In the area of education, the tightening of Magyarization appeared in the form of Apponyi Acts (1907–1908) leading to the exclusion of the Slovak language from schools, and to the denationalization. The developing trend was alarming. The number of Slovak people schools decreased from 2,016 in 1876 to 354 in 1913, while in the same period the number of Magyar people schools rose from 1,036 to 3,478 (Potemra, 1978, p. 533). A high degree of illiteracy in Slovakia was the heritage of the former Hungarian Kingdom school authorities' carelessness. Before the takeover, the school attendance in many villages had been irregular, mainly in the period of spring and autumn works. In 1910, an average of illiterate people in 16 predominantly Slovak counties

was 34 %, in the counties with the Ruthenian inhabitants even 65 %. In the Czech regions, the number of illiterate Czechs was at that time 2.34 %, and of the Germans 2.19 % (Magdolenová, 1981, p. 483).

After 1918, the education administration in Slovakia was taken over, after the former Ministry of Cult and Education in Budapest, by a special Slovak department of the Ministry of Education and National Enlightenment in Prague whose School Office of the Ministry with Full Powers for the Administration of Slovakia was its lower-ranking body. Its competencies were subject to the Act No. 64 of December 10, 1918. In this way the government assigned the right to give full powers to a designated member of the government "...to pass regulations, and carry out everything to maintain the order, to consolidate conditions, and to arrange a regular state life" (Act No. 64/1918, p. 55).

Full powers were assigned to the minister Vavro Šrobár who created several offices, together with the Office for Education. It transformed into the Office of Ministry of Education and National Enlightenment in Bratislava. Its main goal in the first months following the creation of the Republic was "to remove as soon as possible, and as intensively as possible the largest part of the non-Slovak teachers and professors, in merely Slovak areas to transform the institutes into Slovak institutes, to establish quickly inspectorates for people schools, and to apply all the Slovak labour farces, if applicable, to leading and prominent positions" (SNA, Card. No. 13, Inv. No. 667, Beginnings of New-Era Education in Slovakia, p. 8).

The shortage of Slovak teachers was apparent immediately after the establishment of the Czechoslovak Republic. On one hand, it was a consequence of the departure of Hungarian nationality teachers and professors from Slovakia, who, according to the Government Ordinance No. 495 of August 28, 1919, were not willing to take an allegiance oath of the common and people school teachers to the newly created state. On the other hand the teacher institute graduates affiliating to the Slovak nationality acquired education in the Hungarian language. In this way the solution of the staff issue in the area of filling the teacher jobs became one of the most significant tasks in the operations of the Office of Education. It was the Minister with Full Powers for the Administration of Slovakia, Vavro Šrobár, the government official Anton Štefánek and Jaroslav Vlček, representing the Ministry of Education and National Enlightenment, who initiated the idea for the arrival of the Czech teachers in Slovakia. It was actually a similar solution of the shortage

of related qualified labour personnel as in case of other spheres of the state administration (Krajčovičová, 1999, pp. 179–184).

The staff filling in the area of Slovak education became a complicated issue. Inappropriate candidates were provided with three-month compensation, and they were recommended to be employed in Hungary. The Office of Education was trying to find most of all "... the teachers and professors of the Slovak origin who had not yet lost completely the sentiment connected with the Slovak nation" (ALU SNK, f. A. Štefánek, Inv. No. 42-XIV-84, pp. 3–4).

However, the success of this idea was very limited among Slovaks, even if the Romanian and Yugoslav cities and towns belonging to the Hungarian Kingdom were searched. For the purposes of the state administration, the new Republic needed 17 county supervisors, 190 district chief-executives and 2,800 notaries. Thanks to the thorough Magyarizing policy, just 1,200 Slovak affiliating intellectuals were available in 1919, 200 of them were with judicial education, while a part of these were looking for a job in a more profitable private sector (Šrobár, 1928, pp. 161–403).

With respect to the situation in Slovak education, Vavro Šrobár stated that there were "... perhaps 300 descent-devoted Slovak teachers for common schools, and perhaps 20 secondary school Slovak professors among which just a small portion had been known during the preceding period. More than 4,000 people schools and all the secondary schools and higher education institutions were in the hands of the Magyars, Magyarized ones, or Half-Slovaks. ... We may boldly claim that besides several schools where a scattering of predominantly evangelical teachers was working, the Magyar word and spirit was taught" (SNA, f. A. Štefánek, Card. No. 12, Inv. No. 655, Debate on Slovak Education).

How to solve the given problem? There were several ways available. The Slovak Evangelic Protestants together with Martin Rázus suggested providing the nation-conscious priests with the access to secondary schools as professors. This was refused by Anton Štefánek, arguing with their inadequate qualification (ALU SNK, f. A. Štefánek, Inv. No. 42–VIII-3, Office of Education).

It was Anna Magdolenová who critically evaluated this attitude from a longer period distance perspective. "In situations where this attitude was absent, the irredentism, Hungarophile attitude and reactionism were assumed. They did not reckon on the third possibility, i.e. the state-forming process from the purely Slovak-national perspective. They considered it as suspect,

and they even identified it with the Hungarophile attitude" (Magdolenová, 1981, p. 486). As far as the cause of the Slovak professors shortage at secondary schools was concerned, the author introduced the fact that "... many of them belonged to spiritual orders and were under the order discipline and obedience oath towards the orders' supervisions, which were pro-Hungarian. Thus it happened that the number of Slovak professors at schools was probably five times lower than the number of the Czech professors" (Magdolenová, 1981, p. 487).

As to Anton Štefánek, he was embarrassed by "... the so called October Ones, the previous teachers and professors of anti-Slovak opinions whom ... he could not naturally know altogether. Each of them pleaded their secret, but definitely Slovak sentiments. Due to the fact that they were stammering the Slovak language and they gave away the lack of knowledge concerning the Slovak movement, they usually became suspicious" (ALU SNK, f. A. Štefánek, Inv. No. 42-VIII-3, Office of Education).

With respect to dismissing teachers, Štefánek stated: "On the basis of my own knowledge and the information sent to me, I was especially dismissing the teachers who were known for their extreme chauvinism, who would never agree with the engagement, and who would never educate the youth in accordance with our spirit" (SNA f. A. Štefánek 1900–1960, Card. 13, Inv. No. 667, Beginnings of New-Era Education in Slovakia).

Some of the nationalists, for instance Samuel Zoch and Ján Ruman, were pushing ahead the idea to let the former teachers at schools, and those who were not able to speak Slovak would learn it within the following two or three years (SNA, f. A. Štefánek, C. No. 13, Inv. No. 676, First Days of the Liberated Slovakia and the Slovakization of Education, p. 14). In practise it would mean that the teaching language would be new, but the spirit would remain old. In December 1920, Anton Štefánek reported at the meeting of the government on the results of the verification of the teaching staff Slovak competence at grammar schools in the towns of Ružomberok and Liptovský Mikuláš. The result was that besides a professor of Physical Education in Ružomberok nobody spoke Slovak. A similar situation was also in the towns of Martin and Brezno. Ivan Dérer suggested the adoption of a rule stating that those unable to speak Slovak would not be allowed to teach (Mlynárik, 1987, pp. 84–89).

Vavro Šrobár and Anton Štefánek maintained the position that in selecting the staff it was not sufficient to de-Magyarize solely on the language principle, but it was necessary to prefer the "Czechoslovak and Slav" sentiments. They insisted that "... despite little exceptions, it is not possible to trust the Magyar and Magyarized individuals, ... because they are psychologically deeply rooted in the Magyar nationalism" (SNA, f. A. Štefánek, Card. No. 13, Inv. No. 676, First Days of the Liberated Slovakia and the Slovakization of Education, p. 14). In this context, Anna Magdolenová writes that it deals with "... a school filling by the Czechoslovak element. Not just by the Slovak one, i.e. by the staff with as much Slovak knowledge as possible, but also with the staff respecting the Czechoslovak state and government..." (Magdolenová, 1981, p. 482). So, in the efforts to preserve the Czechoslovak spirit at Slovak schools, teachers took an oath of professorship and teachership: "I pledge that I will carry out my pedagogical duties according to the ideas of my conscience, I will lead the entrusted youth to the good, truth and beauty, I will always keep in mind the benefit of education and I will comply with the effective laws and regulations, and I will work in my position with all efforts to uplift the Czechoslovak Republic" (Věstník MŠANO, 1919, p. 25). So, while employing the school staff, they decided for the principle of loyalty to the Republic, which was understandable, but it was also causing much misunderstanding and hardship, pointed out by several Slovak national intellectuals in a short period (Matula, 2006, pp. 24–29).

Education became the cultural development foundation of the young state. After the long-term assimilation process of the former Hungarian Kingdom, a need to Slovakize it actively appeared. The Education Administration solved the given problem by employing the teachers, professor, and officials from Bohemia, and Moravia on the basis of the requirement of the Minister with Full Powers for the Administration of Slovakia, Vavro Šrobár, in December 1918. It was about 1,400 persons. At the same time, the elementary school textbooks were changed (Nosková, 1989, p. 102). The arrival of Czech teachers and professors was legally based on the Act No. 605/1919, St. B. of October 29, 1919, which enabled to order officially a state employee, teacher or professor to work in any place in Czechoslovakia (Act No. 605/1919, p. 935). Anton Štefánek gave reasons for his actions in the following way: "I briefly recalled the main principles of every school policy and pedagogy: a school consists of pupils and teachers. There were a lot of pupils, but almost

no Slovak teachers. There were just two roads available for me. Either to preserve the old teaching staff in their positions and to provide them with a time and opportunity to learn Slovak and the national (democratic) enthusiasm (SNA f. A. Štefánek, Card. 15, Inv. No. 684, Secondary Schools in Slovakia), or to exchange them with the Czech teachers. I decided for the second opportunity" (SNA f. A. Štefánek, Card. 15, Inv. No. 688, Education in Slovakia).

To provide a high number of the working labour from Czech countries was possible thanks to the surplus of secondary school and university graduates caused by the unemployment prevailing after the 1st World War. Without the fact that there was "... a considerable number of the unemployed ... professionally qualified ... pedagogical, judicial ... proletarians, it would not be possible to pacify the Slovaks" (Pšenák, 1991, pp. 15–16).

The first wave of the Czech professors came to Slovakia in a number of more than 250 in 1919 (Schubert, 1990, pp. 72–78) on the basis of the appeal of the Minister with Full Powers for the Administration of Slovakia, Vavro Šrobár (www.saske.sk/cas/3-98/studia2.html).

A wide migration started, which was taking place during the total existence of the first Czechoslovak Republic. It had an impact on towns and the country as well, and the arrival of the Czech teachers was a needy and positive step. A new era in the development of the Czech-Slovak and Slovak-Czech relations started, surpassing in significance the existing contacts. The Czech intelligentsia was helpful to the Slovak nation to be established among developed new-era nations of Europe. Already in the first year of the young state existence, Anton Štefánek appreciated, in the report of the budget committee on the state budget of Czechoslovakia for 1919, the positive influence of the Czech teachers in building Slovak education: "The Czech teachers proved themselves in an outstanding way, and their activities and influence were apparent everywhere they came. And I am just pointing out that in the period of seven months we have organized with good Czech professors and teachers (sic) filled probably 70 secondary, vocational and civic schools, then we have placed some hundreds of the Czech teachers at elementary schools..." (www.psp.cz).

Development of Secondary School Education in Slovakia

After the establishment of Czechoslovakia, there were differences among the schools system of the Czech countries and Slovakia. The compulsory

school attendance in Czech countries took 8 years, but in Slovakia it took just 6 years. According to the establishing bodies, there were state, civic, church and private schools in both territories. The elementary education at a people, or common school was followed by a civic school with three years in the Czech countries and four years in Slovakia. In the area of secondary school education, it was necessary to harmonize the curricula of the schools of a grammar school type. The differences of secondary professional schools and vocational school education were coming out of various economic conditions of Bohemia, Moravia and Slovakia. The education of art did not exist in Slovakia at all. In 1914, the Magyar Elizabethan University was established, which was not finished in its construction, and it came to its end in 1918.

The supporters of the school system unification, school legislative reorganization, school management, and administration in the Czech countries and Slovakia assumed the removal of these differences from the former period, and the introduction of new common principles presenting the base for building a school system of a democratic state (Kázmerová, 2004, p. 418).

In the area of secondary school education, the creation of secondary school network in Slovakia in the period of the first Czechoslovak Republic was connected with its reorganization following from the unifying efforts of the governmental bodies. The reform base was created by the Act No. 293/1919 St. B. of May 27, 1919 (Act No. 293/1919, p. 397).

The structure of secondary schools was created by eight-year grammar schools, realschules, and four-year teacher institutes whereas the grammar schools were divided to grammar schools, eight-year grammar schools, eight-year reformed grammar schools, and realschules. According to Hungarian laws, even the institutes for nurses and higher schools for girls. The most popular type was represented by eight-year grammar schools because the graduates could study at a university or technical higher education institution. Grammar school education required the execution of entrance exams. A pupil at the age of 10 could become a student. For the secondary schools, i.e. all the types of grammar schools, industrial schools, commercial and teacher institutes on the whole territory of the Republic the law defined the same curricula, textbooks and conditions for the enrolment of students at secondary schools. The law defined the examination conditions, student classifications, it unified the terms for holidays, conditions for school-leaving exams, their content and scope.

In the 1930s, the reform efforts of the Minister of Education, Ivan Dérer, partially shifted the system unification of secondary schools prescribed by curricula. The compulsory curricula determined a common teaching plan for all the types of grammar schools in the 1st–4th year different from the 5th and 7th year. The law defined the study possibilities at universities and technical schools.

The degree of unification became also apparent in the represented teaching subjects. The differences followed from the cultural-ideological traditions of both countries. While the Czech countries left out religious education in the final tree years, it was taught throughout the whole study period in Slovakia. This phenomenon was closely connected with the political situation in Slovakia, i.e. with the growth of the Slovak People Party influence and its negative attitude to school secularization. The Slovak society was particularly sensitive about the interferences in the area of religious education, and considered it as a discrediting of religious traditions and attacking of religious rights (Kázmerová, 2004, p. 426).

Table 1: Grammar schools in Slovakia in the school years of 1919/1920–1937/1938

School Year	Number		Students		Teachers	
	of Schools	of Classrooms	Total	Girls among them	Total	Women among them
1	2	3	4	5	6	7
1919/1920	43	353	11,951		716	54
1920/1921	44	375	12,916	1,982	808	72
1921/1922	44	387	13,157	2,363	896	74
192219/23	42	419	13,770	2,563	780	73
1923/1924	44	442	15,561	3,085	800	86
1924/1925	42	457	16,247	3,325	808	102
1925/1926	42	478	16,522	3,367	805	95
1926/1927	42	488	17,084	3,579	819	96
1927/1928	45	488	16,011	3,357	869	111
1928/1929	45	493	16,229	3,765	902	123
1929/1930	44	507	16,666	3,637	944	152
1930/1931	44	529	18,051	4,269	966	165
1931/1932	44	574	20,138	5,227	1,032	187

1932/1933	44	571	21,513	5,947	1,020	180
1933/1934	44	609	22,882	6,788	1,042	226
1934/1935	44	623	23,943	7,368	1,104	263
193519/36	50	650	25,137	7,953	1,147	297
1936/1937	56	695	27,692	8,890	1,214	308
1937/1938	57	737	29,519	9,693	1,353	358
1938/1939	–	–	–	–	–	–

Table organized according to: Education in Slovakia. 1949. Schools, students, teachers in the school years of 1918/1919–1947/1948, Bratislava: Slovak Department for Planning, p. 47.

The staff problem of the secondary school Slovak pedagogical experts was solved by the arrival of the Czech teachers. So, in practise, the employment, dismissing, appointing of inspectors, teachers and professors were carried out. In relation to that, Anton Štefánek said that "I mostly inspected the secondary schools personally. I dismissed Magyar professors and looked among them for such individuals who would be able to be engaged for the Republic. On the basis of my own knowledge and the information sent to me, I was predominantly dismissing the professors who were known for their extreme chauvinism, who would never agree with the engagement, and who would never educate the youth in accordance with our spirit" (ALU SNK, f. A. Štefánek, Inv. No. 42-XIV-84, pp. 3–4).

Of course, the state was also creating new study opportunities for the Slovak applicants who were after passing entrance exams studying free of charge in four-year teacher institutes. The studying was finished by a school-leaving exam, and the graduates became temporary teachers at people schools. After completing the 20-month practical service, they were allowed to apply for a teacher competence exam, the passing of which was a condition for acquiring the tenure (Mátej, 1976, p. 347). The first graduates completed their studies at Slovak teacher institutes in the school year of 1923/1924 (Mátej, 1976, p. 352).

Table 2: Teacher academies in Slovakia in the school years of 1919/1920–1938/1939

School Year	Number		Students		Teachers	
	of Schools	of Classrooms	Total	Girls among them	Total	Women among them
1	2	3	4	5	6	7
1919/20	15	57	1,291		197	52
1920/21	15	57	1,418	759	204	36
1921/22	16	59	1,574	839	213	54
1922/23	16	60	1,706	891	196	57
1923/24	16	62	1,790	946	200	64
1924/25	15	64	1,929	934	199	59
1925/26	15	62	1,825	828	185	57
1926/27	15	61	1,736	802	196	61
1927/28	15	60	1,626	748	183	59
1928/29	15	58	1,589	484	177	59
1929/30	14	59	1,815	970	173	58
1930/31	15	65	2,120	1,152	191	62
1931/32	14	67	2,403	1,294	216	79
1932/33	15	74	2,779	1,491	225	73
1933/34	15	65	2,918	1,558	237	72
1934/35	16	75	2,979	1,579	222	66
1935/36	18	73	2,938	1,617	235	74
1936/37	23	75	3,077	1,797	270	89
1937/38	14	54	2,263	1,342	223	76
1938/39	–	–	–	–	–	–

Table organized according to: Education in Slovakia. 1949. Schools, students, teachers in the school years of 1918/1919–1947/1948, Bratislava: Slovak Department for Planning, p. 151.

The situation in the staff employment became gradually stabilized. The exam order of October 1930, which was published for acquiring a regular professor or teacher competence, defined the condition for a secondary school study completion and compulsory eight-semester study at a faculty of arts or faculty of science. The qualification to teach professional subjects was acquired in the Czech countries because there were no technical higher

education institutions in Slovakia. These requirements helped to improve the quality of the teaching process at secondary schools. A number of students was constantly growing. While, for example, in the first school year of the new Republic 1918/1919 there were 15,354 students studying at secondary schools, in the school years of 1937/1938, there were 29,519 students, so, their growth was represented by 92 % (Slovenská vlastiveda, 1936, p. 300).

After the establishment of the first Czechoslovak Republic, it was also necessary to build the network of professional education. In contrast to the Czech countries, Slovakia was on a low level, which was a result of the obsolete agrarian character of the country. The structure of professional education was created by commercial, professional, industrial schools and the schools for women vocations. Later, apprentice schools were assigned to them.

Commercial schools belonged to the most popular schools. The first unifying changes appeared according to the Act No. 73/1922 St. B. in the school year 1922/1923, when a unified type of a four-year commercial academy, two-year commercial school, one-year commercial courses and two-year merchant schools was introduced (Act No. 73/1922, p. 229). The teaching content in all types of commercial schools was defined; however, the unified curricula were only published in 1932. The unification of commercial education was concluded in 1933 by the adoption of unified directives of taking a school leaving exam at a four-year commercial academy. A graduate could continue in studies at a commercial higher education institute, or at a faculty of law after passing a supplementary secondary school-leaving exam (Harna-Kamenec, 1988, p. 82).

The change of social, political, financial and economic situation in the country required qualified experts. The qualification for industrial branches was acquired by experts in higher industrial, master, professional and apprentice schools, and the schools for women vocations. The secondary school-leaving exam and study opportunity were provided by higher industrial schools, which enrolled the civic schools' graduates and the graduates of grammar school lower years. The Governmental Directive No. 25 of February 7, 1925 became unifying in the area of their management (Governmental Directive No. 25, p. 274). It adjusted the administration, supervision, salary and working rates for teachers. The overall administration of industrial, professional and business schools belonged under the competence of the Ministry of Education and National Enlightenment.

Table 3: Industrial schools in Slovakia in the school years of 1921/1922–1938/1939

School Year	Number		Students		Teachers	
	of Schools	of Classrooms	Total	Girls among them	Total	Women among them
1	2	3	4	5	6	7
1921/22	11	62	1,351	22	100	2
1922/23	11	74	1,663	93	145	8
1923/24	11	97	1,771	127	151	10
1924/25	14	101	1,893	117	157	7
1925/26	16	96	2,058	73	141	6
1926/27	14	84	1,737	155	144	6
1927/28	14	91	1,867	115	148	7
1928/29	12	70	691	143	105	6
1929/30	14	95	2,101	205	140	7
1930/31	14	91	1,999	147	140	7
1931/32	14	88	1,772	82	141	6
1932/33	15	88	1,802	69	161	10
1933/34	15	94	1,738	120	164	10
1934/35	14	92	1,694	142	165	11
1935/36	13	91	1,761	166	162	13
1936/37	13	91	1,800	146	173	14
1937/38	12	91	1,945	89	147	7
1938/39	12	87	1,723	123	136	7

Table organized according to: Education in Slovakia. 1949. Schools, students, teachers in the school years of 1918/1919–1947/1948, Bratislava: Slovak Department for Planning, p. 151.

In spite of the fact that Slovakia ranked among agrarian countries, it was the economic schools which played a unique role. Until 1919, they were nine of them with the Magyar language as a teaching language. The following schools ranked among the most significant ones: Mining and Forestry Higher Education Institution in Banská Štiavnica (1763), Winery School in Bratislava (1884), School for Foresters in Liptovský Hrádok (1886) and Agricultural Academy in Košice (1906). People economic schools attended by 14–16 year old students were being established by the Act No. 75/1920

St. B. (Act No. 75/1920, p. 130). Economic schools provided education on a different knowledge level. Their administration was in the competence of Ministry of Agriculture (Mátej, 1976, p. 348).

Professional schools for women vocations had a specific position. They were created by the reorganization of Hungarian schools for housewives. The curricula were prepared in 1920, partly changed in 1925 and revised in 1932 (Slovak Education in the Present Times, 1932, p. 58). The Directive No. 73, St. B. of February 17, 1922 unified this type of schools, adjusted the working load of a teacher. The directive was confirmed by the Act No. 252, St. B. of December 20, 1923 (Act No. 252/1923, pp. 1251–1254). Schools were oriented towards the adjustment and sewing of clothes for women and children, cooking and learning skills necessary for house keeping. Young women could continue in their studies at special schools where they were acquiring skills for establishing their own businesses, qualification in administration, in social institutes for the youth and others (Pázstor, 1995, p. 133).

Table 4: Professional schools for women vocations in Slovakia in the school years of 1921/1922–1938/1939

School Year	Number			Teachers	
	of Schools	of Classrooms	of Girls	Total	Women among them
1	2	3	4	5	6
1921/22	9	15	901	68	42
1922/23	9	19	695	68	39
1923/24	9	38	630	71	41
1924/25	10	44	776	78	52
1925/26	12	46	837	72	49
1926/27	11	38	844	76	56
1927/28	17	55	1,120	119	78
1928/29	20	81	1,452	140	92
1929/30	21	97	1,706	144	102
1930/31	22	101	1,668	160	119
1931/32	23	100	1,577	176	128
1932/33	22	95	1,548	176	127
1933/34	23	100	1,710	175	125
1934/35	21	85	1,556	188	143

1935/36	21	81	1,660	196	145
1936/37	21	85	1,808	217	157
1937/38	20	85	1,631	216	159
1938/39	19	79	1,690	175	134

Table organized according to: Education in Slovakia. 1949. Schools, students, teachers in the school years of 1918/1919–1947/1948, Bratislava: Slovak Department for Planning, p. 151.

Apprentice education seemed to be problematic, which followed from the organization and content aspect of teaching. Its organization was adjusted by the Act No. 259/1924, St. B. (Act No. 259/1924, pp. 1597–1598) with the executive decree of November 30, 1925, which on the basis of an agreement between the Ministry of Education and National Enlightenment and the branch ministries of industry, business, trade, finances, and the Ministry with Full Powers for the Administration of Slovakia unified temporarily the organization, administration, teaching and supervision over autonomous apprentice schools (Placht-Havelka, 1934, p. 926).

In 1928, a commission solving the curricula inconsistencies was established at the Ministry of Education and National Enlightenment. Two years later. It was substituted by a didactic commission for the reform of apprentice schools (Magdolenová, 2004, p. 290).

Table 5: Apprentice schools in Slovakia in the school years of 1921/1922–1938/1939

School Year	Number		Students		Teachers	
	of Schools	of Classrooms	Total	Girls among them	Total	Women among them
1	2	3	4	5	6	7
1922/23	95	333	10,474	335	577	24
1923/24	123	404	11,337	601	688	40
1924/25	133	439	11,767	806	728	45
1925/26	135	472	12,711	1,041	786	63
1926/27	175	530	13,325	1,293	915	90
1927/28	193	578	13,284	1,325	1,015	106
1928/29	196	594	13,596	1,310	1,055	93
1929/30	208	626	13,734	1,298	1,116	90

1930/31	218	658	13,586	1,367	1,193	83
1931/32	241	645	12,061	1,439	1,238	89
1932/33	251	643	10,497	1,400	1,242	87
1933/34	237	600	9,362	1,482	1,191	71
1934/35	233	584	9,828	1,790	1,136	84
1935/36	237	607	11,066	2,077	1,140	104
1936/37	240	684	13,166	2,401	1,199	124
1937/38	131	669	13,427	2,351	1,074	69
1938/39	–	–	–	–	–	–

Table organized according to: Education in Slovakia. 1949. Schools, students, teachers in the school years of 1918/1919–1947/1948, Bratislava: Slovak Department for Planning, p. 151.

A completely new element in the network of education was provided by art schools because they had not had their own predecessors in Slovakia by that time. In 1919, the Private Music School was opened in Bratislava which was functioning on the basis of the financial support from the Music and Dramatic Club. In January 1928, the school was integrated into the network of public schools by a Ministry of Education Decree; its activities were managed from the state financial sources. The school was renamed to Music and Dramatic Academy for Slovakia. In the same year, even the School of Artistic Crafts was established. The teaching linked the tradition of crafts production with the requirements of industrial development. A significant portion in the school establishment was represented by Jozef Vydra, a well-known personality of art. The school had a general specialization, obligatory for all the students, and a special one, in which the fine arts education was acquired. (Dejiny Bratislavy, 1966, pp. 427–435).

The education system in the first Czechoslovak Republic was extended by another element and that was special education, referred to as education for deviant children. It suffered from many difficulties and it gained a legal shape in 1929 by the Act No. 86, St. B. (Act No. 86/1929, pp. 615–619). A maintenance duty was partially taken over by the state, however, private institutions and persons were continuously supporting this area of education in a significant way.

In 1924, a private institute for the education of the deaf-mute was established in Košice with the support of the Regional Club of Thoroughness. In

1925, based on the support of Red Cross, the Home of Slovak Little Cripples was established. In 1924, the State Institute in Kremnica established a continuing one-year shoe-making and tailoring trade school for graduates, which after the completion of master examination authorized a graduate to work autonomously. The Institute for the Blind in Levoča enabled the education in the specialization of basket-makers, brush-makers and musical instrument tuners. In the school year of 1937/1938, there were 13 special schools with 1,086 inmates and 109 pedagogues in Slovakia (Magdolenová, 1982, p. 282).

Another group was represented by the schools of ethnic minorities considered as of different language than the Czechoslovak one. (Ústava Československej republiky, 1923, pp. 30-31). The Magyar minority education linked the education tradition from the period of Hungarian Kingdom, and in fact it did not have to deal with the problem of professional employment as in case of the Slovak education. The legislative also solved the issue of minority Ukraine and German education. In the school year of 1920/1921, there were 727 Magyar people schools, 11 German schools and 58 Ukraine-Ruthenian schools (Kázmerová, 2004, pp. 434–435).

The so called problem of borderer's schools became a paradoxical one when the Slovak inhabitants were getting into the minority position on a mixed Slovak-Magyar territory, and the Act No. 292/1920, St. B. did not define conditions for the establishment of a school in this case. The situation was under discussions in Parliament until 1935. The club of Slovak League was helping to solve the situation abroad; it contributed to the establishment of more than 200 schools, among which there were 49, completely constructed from its own sources (Magdolenová, 1982, p. 280).

A great emphasis was laid on the establishment of a quality secondary school because, as stated by Anton Štefánek, the blooming of Slovakia would be possible just when a "following generation takes positions which have been recently filled with unreliable elements" (SNA, f. A. Štefánek, Card. 15, Inv. No. 688, Education in Slovakia). To fulfil these plans, it was necessary to manage the transition from the so called Hungarism to the Czechoslovakism in the area of education policy. It dealt with the change of a spirit in schools that was significantly initiated by Anton Štefánek: "The national sentiment, and nationalism were considered purely formally here – in a linguistic way. The main aim is to learn how to speak accurately, and to write in accordance with the pure Štúr literary style, and a Magyar or Magyarized professor at

Table 6: Students according to sex at people, civic, secondary schools and higher education institutions in the school years of 1921/1922–1938/1939

School Year	Students		People Schools		Civic Schools		Grammar Schools		Teacher Academies		Higher Education Institutions	
	Total	Girls among them	Total	Girls among them	Total	Girls among them	Total	Girls among them	Total	Girls among them	Total	Girls among them
					In absolute figures							
1921/22	396,340	193,320	356,573	176,511	24,491	13,570	13,157	2,363	1,574	839	545	37
1927/28	372,723	182,743	327,108	165,849	26527	12,619	16,011	3,357	1,626	748	1,451	170
1931/32	575,339	279,904	515,460	256,143	34,945	16,881	20,138	5,227	2,403	1,294	2,393	359
1937/38	635,126	309,941	529,731	262,765	71,272	35,710	29,519	9,693	2,263	1,342	2,341	431
1938/39	....	....	....	....	....	....	....	....	....	....	....	....

Table organized according to: Education in Slovakia. 1949. Schools, students, teachers in the school years of 1918/1919–1947/1948, Bratislava: Slovak Department for Planning, p. 47.

any secondary school will become capable of forming and educating the Slovak youth towards the authentic patriotism and progressive democratic ideal, when s/he overcomes the resistance against the Slovak language, when s/he learns how to speak and write Slovak in a melodious way. As they say, two or three years are enough, and all the Magyar professors will change their language and sentiments to become Slovak patriots and Slovak nationalists and idealists" (SNA, f. A. Štefánek, Card. 15, Inv. No. 684, Secondary Schools in Slovakia). Anton Štefánek radically rejected this attitude due to the fact that the determining factor is not just a language, but also a spirit and attitude represented by a professor (SNA, f. A. Štefánek, Card. 13, Inv. No. 667, Beginnings of New-Era Education in Slovakia).

Conclusion

The Czech-Slovak relations are a significant component in the history of our nations. In the context of history, they were carried out in the area of politics, economy, culture and education. The relations in these areas influenced each other, and brought many positive elements to the national cultural heritage. It was mainly the Czech intelligentsia that helped to raise Slovakia from the hundreds of years of falling behind, also in the area of education. The steps of Vavro Šrobár and Anton Štefánek proved to be right because after the arrival of the Czech teachers, professors and inspectors in Slovakia, an extensive literacy revival of the Slovaks appeared. Besides the area of education, activities in the after-school and people-formation areas were also prevailing. However, it is important that it was not just the new organization system which was started, but predominantly "the spirit of the age" was changed in the sense of an idea that what stands beyond a quality school is a prepared teacher.

One of the Czech professors stated in this respect: "We came to Slovakia not so much to teach, but to fight. I do not mean the fight against the Slovak reaction ... but the fight of two cultures, two kinds of world, and that is the democratic – Czechoslovak world against the Magyar non-democratic world. So, it is the fight against the old culture" (Loubal, 1922/1923, p. 73).

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EFFICIENT EARLY DIAGNOSTICS OF RISK BEHAVIOUR IN ADOLESCENTS

Petra Hedrichová

The monograph *Efficient Early Diagnostics of Risk Behaviour in Adolescents* by Martin Dolejš is focused on risk behaviour, the issue of adolescent personality and presents the results of a research dealing with diagnostics of risk behaviour in adolescents in the Czech Republic.

The first chapter is focused on the concept of the norm and normality from various points of view. Further, it presents features of norms, classification of norms, classification criteria etc., framing it with the cultural and historical contexts. It also deals with the definitions of the risk, problem, deviant, delinquent, asocial, antisocial and other types of behaviour, showing that these terms define similar, often overlapping, areas of interest. Despite certain links within these terms, the author considered the term risk behaviour to be superior over the others, being an umbrella expression for all the Terms.

The following chapter titled is focused on the theoretical background of the risk behaviour phenomenon, on the biology- (theory of the born criminal, influence of heredity) and psychology-oriented (personality features, intellect) theories, further on the theories conditioned by social factors (labelling theory, theory of anomy, theory of delinquent environment) and the eclectically-oriented theories (syndrome of problem behaviour), "directing attention to the entire developing personality of an adolescent, not separately to distinct problems" (p. 33).

The third chapter deals with various forms of risk behaviour, divided into seven basic categories for purposes of this book: use and abuse of legal and illegal substances; criminality; bullying, hostility and aggressive behaviour; problem sexual activities; school problems and offences, extremist, hazardous and sectarian activities; other forms of risk behaviour. Distinction of these categories is based on documents of the Ministry of Education, Youth and Sports of the Czech Republic but can be also found in several other publications referred in the text.

In fourth chapter the author endeavours to define terms adolescence, pubescence, puberty on both the content and temporal levels, proceeding from various conceptions. The author paid attention to biological, psychological and social changes in adolescents, search for and forming of a new identity. The author also mentioned the influence of three linked subjects – the family, the school and peer group, having an important role in the life of adolescents. Also he discussed risk factors – i.e. variables increasing the probability of the occurrence of a form of risk behaviour, and protective factors – i.e. variables having a positive influence on the occurrence of forms of risk behaviour and decreasing the frequency of their occurrence.

The fifth chapter is considered highly beneficial, especially for the fields of psychology and prevention of risk behaviour; the author introduces the readers into foreign psychodiagnostic tools he and his colleagues tried to transform into the Czech environment and which became a part of his research survey. These are the "Substance Use Risk Profile Scale" (SURPS) questionnaire by means of which four risk factors of personality – namely despair, oversensitivity, impulsivity and search for excitement – that can be one of the motives for abuse of legal and illegal substances and addiction to them; and the "High School Personality Questionnaire" (HSPQ). Further the theoretical constructs of these questionnaires, their contents, characteristics of personality features are described in detail.

The following chapter describes the content of this chapter. Not only information of the state of the Czech society, development of population in the last 20 years, unemployment rate is presented here but also information of the number of committed crimes, especially by the minors and juveniles, and information related to use of legal and illegal substances in adolescents.

Also the next chapter offers a number of statistical information related to the population of pupils of primary and general upper secondary schools in the Czech Republic and each administrative unit. Further the author deals with the description of the research sample consisting of nearly five thousand and a half respondents of pupils of the 6th to 9th grades of primary schools, primary art schools, basic practical schools and pupils of the 1st to 4th grades of general upper secondary schools from the entire territory of the Czech Republic.

The eighth chapter presents the outcomes of the research project on the basis of which statistical analyses were carried out and population norms of

each category were formulated. These outcomes contributed to the formulation of a standardization of an efficient psychodiagnostic tool of prevention focused on adolescents displaying risk behaviour or tendencies to it, namely by means of early screening and early intervention.

The following chapter is conceived in a similar manner where the research outcomes used for the updating of the sten norms of each factor for pubescent of 11–16 years of age what was the primary and only objective of the use of this method, are presented.

An analysis of interrelations between the SURPS factors and the HSPQ factors was carried out within the research and these outcomes are presented. The author mentions the similarly focused researches abroad and compares his outcomes and the outcomes of the foreign researches. He formulates a hypothesis that the factors named differently in three different diagnostic methods can measure the same personality features.

This book and its concept endeavours to contribute to deeper and more complex understanding of the issue of risk behaviour and adolescent personality, especially thanks to interconnecting knowledge of several scientific fields, based on the latest information grounded on scientific researches. However it is not possible to reach the absolute core of some phenomena and problems with regard to the extent of the text and the broad scope of this issue. The author is aware of this fact, and often refers the readers to both Czech and foreign specialized literature on which the text is based and which is quoted here. An indispensable function in this area is fulfilled by the footnote apparatus enabling the author to present more knowledge from the given area.

Supplementing the explanatory text with charts and diagrams with processed statistical information, survey outcomes related to the selected forms of risk behaviour, demographical data and outcomes of the realized research, enables the readers to get a better insight into the given issue.

Appreciated is the use of name and subject indexes helping the readers be better orientated in the text. The good overall arrangement is supported also by the text composition, structuring of the texts into chapters, subchapters and units as well as the graphical form of the chapter, subchapter, chart and diagram titles in blue.

The benefit of the reviewed book is seen especially in the fact that it offers a complex and comprehensive view of the area of risk behaviour in

adolescents and presents psychodiagnostic tools that have not been used in the Czech Republic and can be beneficial for efficient prevention of risk behaviour in adolescents. This publication can be recommended to students and graduates from Psychology as well as other majors dealing with risk behaviour and prevention because detailed and valuable information can be found here.

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METHODS FOR ALL SUBJECTS

Kamila Kmentová, Milena Öbrink Hobzová

One of impulses for the authors[1] to write the above mentioned book was the characteristics of the world we live in, which is connected to a wealth of information as well as a multitude of ways how to obtain it. One of the current trends is life-long learning, a process demanding the need of an intensive as well as long-term acquisition of abilities. The aim of the book is to describe and didactically sort the traditional methods which can be used in the learning process under the new conditions demanded by the world of today, but the book also presents new methods within the field.

The term method is understood in two ways. The first one is as a teaching method, the latter as a learning method. According to the authors the border between the above mentioned meanings is very thin, it is also viewed that generally a method should be used as a means of learning and acquiring knowledge, competence etc. This is required in today's world which is – as we have mentioned above – characterized by life-long learning. Therefore the techniques introduced in the book are aimed at being useful for teachers as well for learners.

The authors think that those teachers who know a wide variety of teaching and learning methods can hinder from using monotonous methods that often make learners unwilling to study. We can apply this not only to the educational situation at German schools, but also to the others in Europe. There is a certain connection with Czech schools too, since Czech teachers have also been required to use various methods in their lessons, especially in association with the Framework Educational Programme for Basic Education.

The book is divided into the following chapters: *Lernen organisieren* (To organize learning); *Gruppen gestalten und begleiten* (To build up and facilitate

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[1] Gerd Brenner and Kira Brenner have written together for example *80 Methoden für die Grundschule* (80 Methods for Basic School) or *Fundgrube Methoden I* (Fundgrube Methods I).

groups); *Recherchieren und erkunden* (To find out and to search); *Informationen strukturieren, verarbeiten, bewerten* (To structure, process, evaluate information); *Filme verarbeiten* (To work with films); *Gespräche führen* (To manage interviews); *Präsentieren* (To present); *Üben und einprägen* (To practise and remember); *Evaluieren* (To evaluate). The given groups of methods are further divided, e.g. the part To present contains chapters focusing on independent oral presentation, on writing points for a presentation, on creation of a visual support of a presentation etc.

We can say that the book works as a sort of a catalogue where we find the description of individual methods which is either one or two pages long. At the head of the page there is the name of the method. If there is extra material on the attached CD, there is a graphical sign for a CD in front of the name of the method. At the top of the page there is also basic information about the social form of the method (group work, individual work etc.), time necessary for realizing the method, tools and age group of learners for whom the method is suitable. All above mentioned is followed by the didactic potential of the method, its preparation and course. The authors also describe didactic instructions, alternatives for particular methods, or suggestions for the method's other applications. At the bottom of the page there are footnotes referring to other literature or websites connected to the certain topic.

The book presents more than 200 methods which can be used when teaching at primary and secondary schools. Therefore readers can use this book as a wide methodology material from which they can get new ideas for lessons. The modern character of the book is also supported by the attached CD which contains extra material for individual methods, mainly recommendations connected with the application of methods and other copyable material.

The stated methods have all been tested in practice for example in the school environment, in the further education of teachers, in study groups at universities or in after-school education. This practical character is definitely one of the book's strongest sides.

We are of the opinion that the publication deals with the given topic in an excellent way. It would probably be well received among the Czech teachers and pedagogues, as it offers many ideas how to vary not only the work with pupils, but also their learning process. It is almost impossible to find any negatives about this book since it combines theory and practice in a persuading way, promising to be useful for most active teachers. Finally, we would like

to point out that *Methoden für alle Fächer. Sekundarstufe I und II would* is exactly what is absent on the Czech book market and that it hopefully will be translated soon.

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