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Individual Learning Styles and Strategies

Thesis

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Individuální styly a strategie učení

Diplomová práce

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V Pardubicích dne 26. 02. 2002

Barbora Dujková

Velmi děkuji všem, kteří mi pomáhali s diplomovou prací. Mé díky patří zejména vedoucí mé práce, PaedDr. Monice Černé za její ochotu a laskavost, dále pak Filipu Tomáškoví a celé mé rodině. Velmi si vážím jejich zájmu o moji práci a toho, že mi byli po celou dobu studia oporou.

Barbora Dujková

ABSTRACT

The thesis of this paper deals with individual learners' learning styles and strategies - a problematic that the Czech teachers are just starting to get familiar with in theory and practice.

The theoretical section covers the basic terminology and proposes a list of the main classification of learning styles, such as: *deep* and *surface* approaches to learning, *holist* and *serialist* learning styles, *accomodating*, *divergent*, *convergent* and *assimilating* type of students, and others. Next chapters comprise descriptions of some other differences between learners which are influential for the learning styles study. Then other crucial terms are introduced: *individualisation*, *metacognition* and *autoregulation*. The last chapter is a discussion about the possible teachers' reactions to individual learning styles.

The practical section was aimed to suggest one model set of procedures that teachers can use if they want to respect learning styles of their pupils. Firstly, a practical research was performed to find out whether learners of a class really possess various learning styles, described in the theoretical section. Perception preferences were investigated, i. e. *visual*, *auditory*, *tactile* and *kinaesthetic* type of learners. The results confirmed presence of all the offered styles. In the following discussion possible changes teacher can apply in teaching vocabulary were described. Generally, although the *auditory* and *visual* learners profit quite a lot from the lessons, teachers should always consider if some other techniques suitable for *tactile* and *kinaesthetic* learners can be used: such as role play, total physical response, etc.

SOUHRN

Předložená diplomová práce se zabývá individuálními styly a strategiemi učení - problematikou, se kterou se čeští učitelé teprve začínají seznamovat jak v teorii, tak v praxi.

Teoretická část práce pokrývá základní terminologii a obsahuje výčet charakteristik hlavních typů individuálních učebních stylů z různých hledisek, například: hloubkový a povrchový přístup k učení, *holistický* a *serialistický* učební styl, *akomodující*, *divergující*, *konvergující* a *asimilující* typ žáka a další. Další dvě kapitoly jsou věnovány těm psychologickým rozdílům mezi žáky, které úzce souvisí s problematikou stylů učení, a představením dalších podstatných termínů: *individualizace*, *metakognice* a *autoregulace*. Poslední kapitola pojednává o možnostech učitelů reagovat na individuální styly učení.

Cílem praktické části bylo popsat způsob, kterým se učitel může vydat, pokud hodlá respektovat styly učení svých žáků. Cílem výzkumu bylo zjistit, zda složení žáků ve třídách odpovídá studiím popsaným v teoretické části. Zkoumány byly učební preference, tedy *zrakový*, *sluchový*, *hmatový* a *pohybový* typ žáka. Výsledky potvrdily zastoupení všech nabízených učebních stylů. V následující diskusi byly navrženy změny ve vyučování slovní zásoby, které učitel může na základě výsledků výzkumu provést. Zrakový a sluchový typ žáka vesměs těží z běžných vyučovacích hodin. Učitelé by se ale měli zamýšlet, jak zapojit do vyučování také žáky hmatového a pohybového typu. Jednou z možností jsou inscenační metody.

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1. INTRODUCTION

One of the main shifts in pedagogy is the approach towards learners. That means respecting the learners' individualities, arranging environment around them in order to create the best learning conditions for the children and development of their abilities. Similar ideas are expressed not only in the "Bílá kniha" – the Czech national programme of education development but in many other sources.

Teacher training comprises a lot of ideas for education: methods, techniques, procedures suitable for teaching various subject matter are presented. However, teaching methods provide and enlarge the area for pupils' learning only when they are suitably used. Teachers have to decide which methods are suitable for which environment and at the first place they have to choose them with respect to individual learners. If the methods are not formed with regards to the peculiarities of learners and specialities of human learning, they can effect the results of learning in a negative way. (Mares. 1988:17.)

Concerning learning, one of the major difference between learners is their learning styles. In the USA, for thirty years, there have been efforts to diagnose learning styles of pupils and students, and improve their school success. Nevertheless, in the Czech school system there is the danger of ignoring individual learning styles. Mareš (1992:219.) states that neither Czech teachers nor the research experts are familiar with the theme. There are only few individuals who have some experience with the diagnosis and these are people working at alternative schools. The same danger also concerns individual teaching styles of teachers.

The theoretical section of the thesis constitutes a study of issues collected from a number of books. The first chapter includes important terminology, in which not only the crucial „learning style“ is defined, but also other essential terms: „learning“, „learning strategy“, and „cognitive style“. Next chapter deals with various classifications of learning styles, such as “deep/surface“ approach to learning, “auditory/visual/ tactile/ kinaesthetic” perception preferences and many others. Third chapter of the theoretical section lists other individual differences between learners that are closely connected with learning styles. Further two chapters try to describe an ideal way of leading students to auto-regulation, and possible ways of coping with learning styles.

The practical section includes a practical research on learning preferences, taken in four different classes at Angelevova Primary School in Prague. The final section discusses practical methodological usage of the results with regards on one of the language subskills – teaching vocabulary.

2. BASIC TERMINOLOGY

Not only the sole concept of learning style will be discussed in this chapter. It is because this term is connected and sometimes even overlaps with other concepts: cognitive style, learning strategy and learning.

2. 1. Learning style

It is obvious that learning style is a very complex conception. Authors diverse in their definitions and define it from various points of view.

Parrott's definition is proposed as the basic one. He describes learning style as „an individual predisposition to learn in a particular way.“ (Parrott. 1993:82.)

The next definitions are more complex.

Cornett: „Essentially, learning style can be defined as a consistent pattern of behaviour but with a certain range of individual variability (...). Thus, styles are overall patterns that give general direction to learning behaviour.“ (cited in Tudor. 1996:113.)

For Willing, learning style is: „ ... a notion of inherent, pervasive sets of characteristics which group people into types or place an individual at a particular point along a descriptive scale... Learning style is more concrete than cognitive style, in that it looks directly at the totality of psychological functioning as this affects learning“ (ibid.)

Guild and Garger also studied learning styles from many perspectives and defined differences in:

- cognition, how people perceive and gain knowledge;
- conceptualisation, how people form ideas and think;
- affect, how people feel and form values;
- behaviour, how people act.

(Buss. 1992:210.)

Mareš, one of the few specialists studying the problem of learning styles in the Czech republic, offered another characteristic:

"Learning styles are subtle transsituational manifestations of person's individuality. They represent the metacognitive potential of a person. They are the learning procedures that are temporarily preferred by an individual, procedures unique as to their orientation, motivation, structure, sequence, profoundness, elaboration and flexibility. They develop from the innate basis but they change and enrich during one's life naturally as well as consciously. A person uses them in many pedagogical situations, and relatively independently on the content of learning." (Mareš. 1998:75.)*

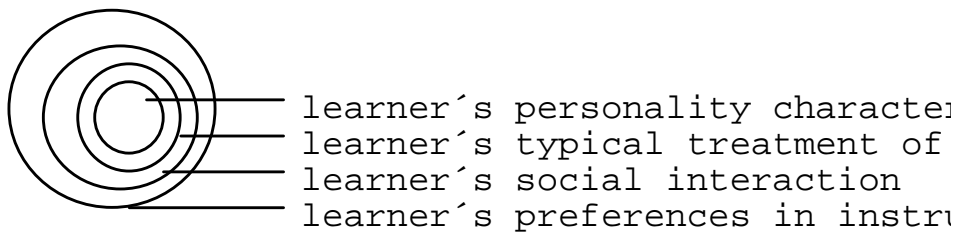
J. W. Keefe distinguished and defined four various components of learning style: cognitive, affective, physiological and behavioural. Each of them can be further segmented into more variables. (Mareš. 1998:72.) Every single component adds to the process of pupils' learning a special and different quality, and it is also developed to different extent. Some of the components may place a pupil in "normal level", in some other the pupil is "better" than the majority of his/her classmates. In another case, however, the pupil can be worse than his/her classmates. Some of the pupils' weaknesses may cause certain difficulties in their learning, which means the results do not correspond with the invested efforts. (Mareš. 1992:219.)

In the diversity of learning styles' definitions there were also attempts to explain the problem of learning styles for example by presenting their key components, indicating their structure, etc.

L. Curry claimed that learning styles have a structure consisting of different "layers" and formed a comprehensible "onion" model of the learning styles structure (see below). Marshall, inspired by this model, presented his own interpretation. The deepest layer is inborn, relatively independent on the outer interventions, and it is very stable. It comprises of the cognitive styles which learners use to learn about the world surrounding them. The next layer contains processes, which develop throughout the learner's life. They are the unique

* all quotations from the Czech sources were translated by the author

procedures used for inner processing of information. The external world (i. e. teachers, parents, friends) can interfere with these processes. They are of average stability and it is possible to affect them pedagogically. Claxton and Murrell added the third level, social interaction, which determines learners' behaviour in the class and at school. The top layer represents the affective processes, preferences. This layer is strongly influenced by outer environment, its stability is negligible. (Mareš. 1992:220; 1998:67-68.)



Structure of learning styles, acc. to L. Curry (modif

Moreover, there are discussions, whether the learning style is innate or acquired. The answer is very important, mainly for the pedagogues. It tells them to which extent it is possible to influence, change and improve pupils' learning styles. (Mareš. 1992:220.)

2. 2. Cognitive style

Cognitive style is usually described as personality dimension which influences attitudes, values and social interaction. It can be called "a habit or regular mental behaviour concerning problem solving". (www.tip.psychology.org/styles.html)

"Cognitive styles have been defined as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment." (Richards, Lockhart. 1994:59. quoting Keefe). Mareš defined them in a similar way as "characteristic ways of perception, storing information, thinking, problem solving, and decision making." Individuals differ in the ways of organising experience into meanings, values, skills and strategies. The differences in their cognitive styles are rather consistent. (www.home.pacific.net.au/~greg.hub/giftedstyles.html)

According to some authors the terms “cognitive style“ and “learning style“ do not have much in common, the others claim that they do overlap, and possibly one is even superior to the other. Mareš (1988:54) prefers the opinion that the term "learning style" is broader, richer, extends the frame of cognition. Therefore the cognitive styles represent only one component of learning styles. He thinks of the cognitive element of learning style as the part which is partly innate, and mostly difficult to influence. (also in Švec. 1998:43.)

An English psychologist, D. Fontana, defines cognitive style with regards to personality. He selects and discusses two approaches to personality: cognitive and affective side of the individual's psychological life. According to him, cognitive style is a "habitual mode of responding which contains both cognitive and affective elements. Affective refers to emotions and feelings, the process by which we actually experience ourselves, while cognitive refers to mental abilities, the process by which we categorise and make sense of the world."(Fontana. 1999:981.)

2. 3. Learning strategies

L. Dickinson describes differences between cognitive style and learning strategies: “cognitive style describes an individual's overall approach to learning, irrespective of the task, whilst learning strategy is concerned with actual activities and techniques which lead to learning.” (Dickinson. 1987:20.)

Oxford defines learning strategies as "specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed and more transferable to new situations." (Richards, Lockhart. 1994:63.) Stern perceives them as "particular forms of observable behaviour, more or less consciously employed by the learner". (Dickinson. 1987:22.)

O'Malley and Chamot classified learning strategies as cognitive, metacognitive and social/affective. Cognitive strategies refer to specific behaviour and include for example reasoning, imagery (i.e. using visual images to understand the given problem) and organisation (grouping and classifying words in language learning) – on the whole, the mental work of the learner. Metacognitive strategies cohere with one's thinking about the learning

process: planning, monitoring and self-evaluation of learning results. They function as higher-order and more general strategies. Among the social, or affective, strategies belongs for example co-operation, questioning for clarification, self-talk and other social interactions which assist learning. (O'Malley, Chamot. 1990: 46; Sutherland. ???:138.) Oxford identifies six general types of learning strategies: memory, cognitive, compensation, metacognitive, affective and social. (Richards, Lockhart. 1994:63.)

All learners manifest certain preferred learning strategies. They include, for instance, strategies for coping with target language rules, including such procedures as generalisation and simplification. (Dickinson. 1987:22.)

2. 4. Learning

It is obvious that people possess various learning styles and prefer to learn in different ways. To understand better the nature of learning styles, it is necessary to become familiar with process of learning itself. However, the term "learning" is obviously very difficult to define.

Many psychologists tried to define the theory of human learning. Apart from other psychological disciplines, such as cognitive or pedagogical, there is a discipline dealing entirely with the problem - psychology of learning. Generally, there were two approaches to the problem of learning, behaviourist and cognitive.

"Behaviourist approach claims that the only condition is to arrange the environment and then the learning will begin automatically." (Fontana.1997:146.) The approach is based on the link between learning and behaviour: "there is a correlation between learning and behaviour. The organism is active, people try to solve life situations and adjust to new conditions." (Linhart. 1982:36.)

On the contrary, the cognitive approach is based on the actual experience.

"Cognitive approach supports the opinion that if we long to understand learning, we have to study the abilities of individuals to reorganise their psychological field (i. e. their inner world of concepts, memories, etc.) into reflection of the outer experiences. This approach accents the manner which individuals use to explain and understand what is happening around them. The cognitive approach does not perceive individuals as mechanical

creations of their environment but as active elements in the process of learning, as someone, who is trying consciously to sort the information received from the outside world.“ (Fontana. 1997:146.)

Kulič collected fourteen definitions of learning, upon which he created his own process-cognitive definition:

"Learning is a process. In its course and consequence people change their set of knowledge about natural and human environment, their forms of behaviour and methods of performance, characteristics of their personalities and the picture of themselves. They change their attitudes towards people around them and towards the society they live in - and all this happens in direction towards the development and higher efficiency. These changes are based on experience, i. e. results of preceding activities that are eventually transformed into the system of knowledge. The experience can be either individual or gained from society." (Mareš. 1998:47.)

The above statements are supported by many theories. Many experts all over the world studied the problem of learning styles or tried to analyse individual differences in learning. They approached the problem from various angles. The following are some of the selected theoretical perspectives of learning.

3. VARIOUS LEARNING STYLES/TYPES

A lot of American pedagogues and psychologists studied the problem of learning styles from various perspectives. In the Czech literature, however, this topic has not been covered sufficiently and there is still a considerable lack of information. The only major source apart from Mareš's „Styly učení žáků a studentů“ is the internet. It offers at least a certain variety of questionnaires that are usually proposed to reveal and diagnose learning style of readers.

3. 1. Deep/surface approaches to learning

One of the best known classifications of learning styles takes into consideration learner's approach to learning. One's learning is not influenced just by cognitive processes and personality characteristics but also by motivation and the school situation. (Mareš. 1988:38.)

Marton and Säljö, representatives of the phenomenological psychology movement, were the first to define the difference between deep and surface approach. Entwistle and Newble became the main representatives of this approach, which now shifted to the field of pedagogical psychology. Later the issue was also studied by Ramsden and Biggs. (Mareš. 1988:21.; [www. ntlf.com/html/pi/9512/article1.htm](http://www.ntlf.com/html/pi/9512/article1.htm))

According to this point of view, there are three basic approaches to learning:

1) *surface* - such students are motivated primarily by fear of failure and desire to graduate at particular subject; they tend to memorise facts, concentrate on isolated tasks and facts and use mostly routine procedures. They find difficulty in making sense of new ideas presented and learn by reproduction of facts with only little or no personal engagement and understanding at all. (Mareš. 1998:39,62-63.; www.bangor.ac.uk/cldt/site/projects/motrep.htm)

2) *deep* - the deep approach is usually linked with the student's intrinsic interest in the subject matter, especially if they need it for their future profession; their aim is to truly understand the meaning; They learn by reconstructing and internalisation of the knowledge. (www. ntlf.com/html/pi/9512/article1.htm)

3) *strategic* - the motivation of this approach to learning is a desire to gain the best grades and to compete with others. Learners of this type put consistent effort into training, they want to succeed, regardless of the situation. Their process of learning is operational, marked with comprehension. They manage time and effort efficiently but the results usually differ, there are different levels of comprehension. (Mareš. 1988:39.; www.bangor.ac.uk/cldt/site/projects/motrep.htm)

3. 2. Holist and serialist strategies

Pask is the main representative of informational psychology. The main idea of his theory was that learning occurs through conversations about a subject matter and solving problems. He investigated strategies used by people working with unknown information, and trying to find the solution. He attempted to explain learning of both living organisms and machines. (Mareš. 1998:25-26; www.tip.psychology.org/styles.html)

The following lines describe the basic strategies of learning he defined:

- holist
- serialist.

These strategies correspond with two basic types of students:

Holists/global learners are believed to prefer learning through global exposure. They tend to learn in large jumps, absorbing material almost randomly without seeing connections. They are able to solve complex problems quickly but they may have difficulties explaining afterwards how they managed it. (www.classroomconcepts.co.nz/ls/lfglobal/htm) Holists use suitable analogies, their abilities to generalise are based on similarities and contrasts. They easily create and use general rules. Their domain is learning by discovery or invention. (Hedge. 2000:18.; Mareš. 1988:25.)

Serialists/sequential learners are those students who like to analyse elements. They proceed step by step, and each is logically following the previous one, through the single parts of subject matter. They may not fully understand the problem, nevertheless, they are able to do something about it (for example, solve the homework problems or pass the test) since the pieces they have absorbed are logically connected. They may be aware of specific aspects of a subject but may have trouble relating them to different aspects of the same subject or to different subjects. (Hedge. 2000:18.; Geddes, Sturtridge. 1982:36.; www.classroomconcepts.co.nz/ls/lfglobal/htm)

Most university courses are taught in a sequential manner, convenient for the serialist learners. However, there are teachers who jump from one topic to another or skip certain steps. Then the serialists may experience difficulties in following and remembering the outline of subject matters. The students then have to consult the teacher or books and construct the outline themselves. Sometimes the teachers start to explain a subject without presenting the relations to what the students already know. This is a major problem for the holists, who need the general idea of a subject before they can master details. What may help them is to study the chapter and get an overview before the lecture. (www.home.okstate.edu/Homepages.nst/toc/EDUC5110iep5)

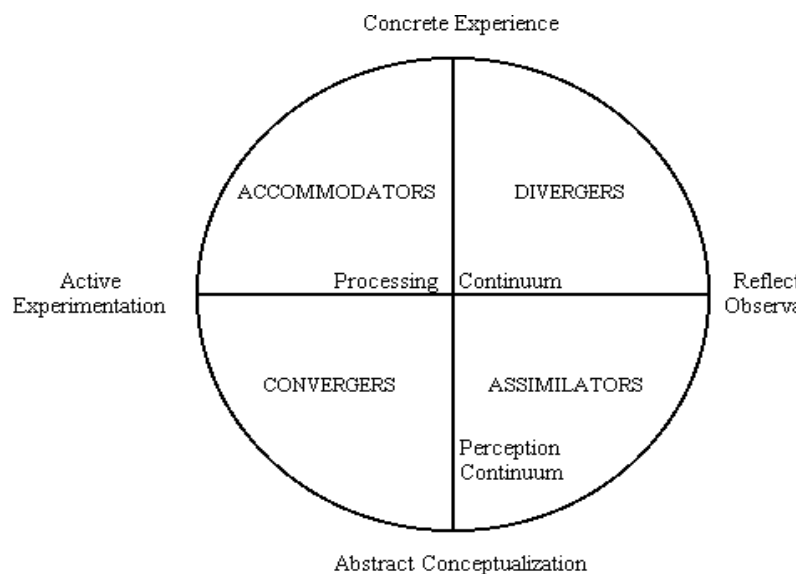
G. Pask reminds us that none of the basic types appears to be more convenient. To the real understanding and mastering of the problem both of the approaches are necessary - holist and serialist, A flexible learner should be able to combine both the holist and serialist strategies. Their integration depends on the context of learning. (Wallace. 1991:23.) A flexible learner creates a structure first and then adds more information and details. (Švec. 1998:44.)

3.3. Convergent, diverged, assimilating and accommodating students

Kolb assumed that learning is a cyclic process. He proposed a “theory of experiential learning”. These are four stages of the learning cycle:

1. particular experience: being involved in a new experience
 2. reflective observation: watching others of developing observations about their own experience
 3. abstract conceptualisation: creating theories to explain observations
 4. active experimentation: using theories to solve problems, decision making
- (www.cyg.net/~jblackmo/diglib/styles-a.htm.)

Although Kolb thought of these learning styles as a continuum which one moves through over a period of time, usually people come to prefer, and rely on, one style above the others.



Kolb's Learning Styles

(www.cyg.net/~jblackmo/diglib/style-a.htm; also in Mareš.1998:23.; Švec. 1998:46.)

Diverged students - it means that their gaining of knowledge diverges in many directions. These students have a lot of ideas, they usually propose different variants of solutions. They acquire their knowledge by particular experience which they later analyse in thoughtful observations. Their strength is in imagination which enables them to view things from various angles, and helps them to express the complexity of newly learned information. A lot of emotionally rich individuals with interests in humanity and artistic subjects belong to this group.

Assimilating students - can absorb and reshape various data, conclude them in a certain whole. They gain knowledge and experience by abstraction. They often create terms and transform them by careful observation. Their strength lies in creation of theoretical models, they prefer abstract thinking, examination of thoughts and theories but the practical applications do not inspire them.

Convergent students - their way of thinking concentrates in one single point of view. If they have a task, they find the answer quickly and correctly. They gain the experience by abstraction, creation of terms, or generalising, and transform them by active experiment. Convergent students prefer working with things and machines to co-operation with other people.

Accommodating students - can easily accommodate to new situations and changing circumstances. They gain knowledge by particular experience and transform it by active experiment. These students have the tendency to risk, they are impatient, hurrying, they often proceed intuitively when solving a problem. (Mareš.1988:25.; www.cyg.net/~jblackmo/diglib/style-a.htm; www.west.net/~ger/Table.htm.)

3. 4. Concrete, analytical, communicative and authority oriented learning styles

This division of learning styles was defined by Knowles. The styles should reflect the behaviour of learners in learning situations, or their preferred strategies. Some people prefer to learn grammatical rules, others never look at them; some people like to meet native speakers and learn through communication with them, others become embarrassed in such

situations; some people spend a lot of time planning before they complete the task, while others start the task without planning and solve the problems as they are completing it. (Richards, Lockhart. 1994:59; Dickinson. 1987:20.)

Knowles characterised learners by following learning styles:

Concrete learning style – learners of this style are spontaneous, curious, imaginative, interested in information that has immediate value, dislike routine learning and written work, prefer verbal or visual experiences and kinaesthetic modality. (Richards and Lockhart. 1994:60.; www.flexiblelearning.net.au/nw2000/talkback/p01.htm)

Analytical learning style – these learners are quite independent, like to solve specific problems and proceed by deductive reasoning. They prefer a logical presentation of new material. These learners dislike failures, and therefore work hard to avoid it. (ibid.)

Communicative learning style – also fairly independent learners, preferring social learning. They need interaction, feedback, discussions and therefore prefer group work. They are highly adaptable and flexible. (ibid.)

Authority-oriented learning style – those learners are dependent and reliant on other people, needs of a teacher. They like structured learning environment and sequential progression, clear instructions and dislike discovery discussions. They prefer teacher as an authority figure.(ibid.)

3. 5. Visual, auditory, tactile and kinaesthetic learners

Visual learners - if they see something, they are more likely to remember it

“These learners respond to new information in a visual fashion and prefer visual, pictorial, and graphic representations of experiences.” (Richards, Lockhart. 1994:68.) They benefit most from reading and learn well by seeing words in books, workbooks and on the board. They can often learn on their own with a book, and they take notes of lectures to remember the new information. Those learners may have artistic ability. Also they may have difficulty with spoken directions. (www.bsd-server.nc.edu/virtcol/ss/learn.html) For instance, some

people often say “I must write it down”, when spelling a word, or remembering a telephone number.

Auditory learners - if they hear something, they are more likely to remember it

“These learners learn best from oral explanation and from hearing words spoken.” (Richards, Lockhart. 1994:68.) They benefit form a lot from conversing with their classmates and teachers or teaching other students. They may use self-talk to think about problems. They are sensitive to tone, volume, pitch of voice. Difficulty may arise with following written directions or reading. (ibid; [www.west.net/~ger/ Table.htm](http://www.west.net/~ger/Table.htm).)

Tactile learners - if they can touch something with their hands, they are more likely to remember the problem connected with it

These learners “learn best when engaged in “hands on” activities. They like to manipulate materials and like to build, fix, or make things, or put things together.” (Richards, Lockhart. 1994:68.) They can assemble parts without reading instructions. If they want to remember facts, the best for tactile learners is to write them down several times or use computer to get the sense of touch. (www.bsd-server.nc.edu/virtcol/ss/learn.html)

Kinaesthetic learners - if they are physically involved in the experience, they can learn better

They learn best by: “touching moving interacting with space and processing knowledge through bodily sensations”. (Richards, Lockhart. 1994:68.) Learners of this type learn best when they move around, touch and talk and use body language. They are good at physical activities (sports/dance/acting) and crafts. They have difficulty with sitting still and need frequent breaks during learning. (ibid; www.bsd-server.nc.edu/virtcol/ss/learn.html)

3. 6. Learning styles and temperament

There exists a model based on Carl Jung’s theory of psychological types. This approach studied people’s reactions to the outer and inner world of experience. Jung identified two primary orientations: introversion and extraversion.

Introverts are more interested in the internal world of their own thoughts, ideas, feelings and self reflections. The impersonal, almost private training will be the best way to learn.

Extraverts prefer to interact with the outer world of things, people and actions. (Mareš. 1988:23 – 41.).

Myers and Briggs offered other divisions, for example:

Sensors like details, well laid out procedures, facts, and practical applications of the information being presented.

Thinkers prefer logical arguments and research results when the new material is presented

Feelers need to see how the information effects people. Devices (such as chat rooms, etc.) that let them know how other learners respond emotionally to the information are useful for them.

Judgers tend to go from beginning to the end over a prescribed route. They like being informed of their progress along the route.

(www.universaleducator.com/LearnStyle/mbt.html)

3. 7. Learning styles and hemispheric dominance

Dunnan and Griggs recognised differences in learning of pupils on the basis of preferring the function of one of the brain hemispheres. They also claim that the differences are caused by either psychological or social and cultural factors. (Mareš. 1988:71.)

“- physiological factors: preference of quiet or noisy background; particular time of day; the need to eat and drink or move during the process of learning.

- influence of social and cultural factors - the influence or early socialisation in the family, impact of the natural social environments, ethnical customs and further cultural phenomena. “

Hilliard investigated the relation between the hemispheric dominance and holistic and analytic approaches towards learning:

<i>LEFT (Analytic)</i>	<i>RIGHT (Global)</i>
<i>Successive Hemispheric Style</i>	<i>Simultaneous Hemispheric Style</i>
Verbal	Visual
Responds to word meaning	Responds to tone of voice
Sequential	Random
Processes information linearly	Processes information in varied order
Responds to logic	Responds to emotion
Plans ahead	Impulsive
Recalls people's names	Recalls people's faces
Speaks with few gestures	Gestures when speaking
Punctual	Less punctual
Prefers formal study design	Prefers sound/music background while studying
Prefers bright lights while studying	Prefers frequent mobility while studying

(www.mathpower.com/brain.htm)

3. 8. Field dependent vs. field independent students

Dickinson describes the contrast between field dependence and field independence as “the varying abilities people have for breaking free from the patterns and structures imposed externally, and the ability to perceive more subtle relationships and connections between parts of a pattern or among ideas in an argument.” (Dickinson. 1987:20-21.)

The following table was based on Hawkey (cited in Ellis.1985:115.) and covers the principal characteristics of field dependent and field independent students:

<i>Field dependence</i>	<i>Field independence</i>
1. Personal orientation i.e. reliance on external frame of reference in processing information	1. Impersonal orientation i.e. reliance on internal frame of reference in processing information
2. Holistic	2. Analytic
3. Dependent i. e. the self-view is derived	3. Independent i.e. sense of separate identity
4. Socially sensitive i. e. greater skill in interpersonal/ social relationships	4. Not so socially aware i. e. less skilled in interpersonal/ social relationships

3. 9. Syllabus-bound vs. Syllabus-free students

“The distinction between syllabus-bound learners and syllabus-free learners is largely a matter of the needs of different individuals for externally imposed structure on their study.” (Dickinson. 1987:22.) Syllabus-bound students study only what they are required to study, while syllabus-free individuals may find the syllabus restrictive; they have a wide range of outside interests which conflict with the demands of the school. (ibid.)

3. 10. Learning styles and age

American psychologist D. A. Kolb based his learning investigations on an assumption that learning is a cyclic process emerging from the learner's experience, which changes with the age of the person. He distinguishes three stages of development:

1) *acquiring* - concerns the period from the birth to fifteen years of age. In that period of time people acquire knowledge and basic skills.

2) *specialization* - concerns the period from sixteen to forty years of age. People specialize, choose the direction of their future studies and professions, they find their place in the world, and the goal of their lives.

3) *integration* - concerns the period from the age of forty until the end of life. There comes discrepancy between the need for specialising and for personal fulfilment. Especially in the middle age comes a certain shift from the reflective observation to experiment activities, from experimenting to contemplation, from abstract knowledge to concrete etc. People start to enjoy their lives, they deepen their experience, and activate abilities which they have never used before. (Mareš 24,68)

3. 11. Some relationships between the systems

There were also attempts to define parallels between the systems. Following statements are the example of such efforts:

„Extroverts are likely to be holist and syllabus-free but it is difficult to make these judgements between these different systems.“ (Parrott. 1993:45.)

Ellis claims, that field dependent student operate holistically and field independent students analytically. (see chapter 3. 8.) The same idea is supported by Dickinson:

”The distinction between holist and serialist learning has some apparent relationships with field of independence/dependence. According to Entwistle holist learners tend to ask questions about broad relations and form hypotheses about generalisations, while serialists ask questions about much narrower relations and form specific hypotheses. (Dickinson. 1987:21.)

The third chapter listed various classifications and characteristics of learning style types. Teachers should think about them and try to identify learning styles of their pupils. However, learning style is not the only factor that makes differences between learners. Teachers must also take into consideration that each learner is a complex individual who possesses a great variety of factors correlating with the preferred learning style. Therefore, these differences will be discussed in detail in the following chapter.

4. INDIVIDUAL DIFFERENCES BETWEEN LEARNERS

There is a lot of distinctive individual differences between learners. Some of them have the best pre-dispositions for intellectual and creative activities, others do not. All of them represent various cognitive and learning styles but they vary in many other aspects, which influences their learning styles. For example, in their conception and orientation to learning, intelligence, aptitude, social background, experience, etc.

4.1. Differences between learners - summary

Some differences between learners in SLA (also Ur, 1996,304):

learning style	language-learning ability	confidence motivation
language knowledge	knowledge of other languages	interests
orientation	conception of learning	age
intelligence	cultural background	maturity
aptitude	learning experience	gender
personality	educational level	independence
attitude to the language	world knowledge	self-discipline
attitude to the teacher		

Cangelosi also mentions some other differences we should bare in mind:

- Drug usage
- special needs ADHD (attention deficit hyperactivity disorder)

In the following pages those differences between learners will be discussed, which are important for the study of learning styles.

4.2. Learning orientation

Learners vary in their learning orientation, which has crucial effect on their learning style.

There are four basic types of learners' orientation:

- “orientation towards the sense of what is being learned (the core is the deep approach to learning and internal motivation)
- orientation towards reproduction of what is being learned (the core is the surface approach to learning, fear from failure, and external motivation)
- orientation towards performance (the core is the strategic, utilitarian approach to learning, performance orientation)

- out-of-school orientation (the core is focus of students on sports or social out-of-school activities, negative approaches towards school and learning)” (Mareš. 1998:64.)

Entwistle also conducted a research on the whole study orientation of students which covered all basic approaches plus various types of motivation. Based on research he distinguished four types of study orientation:

- 1) subject matter orientation - implies the deep approach to learning, holistic style, and inner motivation. Students learn because of interest, learning is a form of development of their personalities. We can find many students who try to understand the subject matter but fail when they try to discover the sense or endure while learning.
- 2) reproductive orientation - implicates surface approach to learning, serialist style. The motivation is formed by the fear to fail and the instrumental motivation highly prevails. The learners use memory and mechanical learning, they reproduce the subject matter word by word, and revise is to the point of over-learning. The learner is learning under the pressure of an external authority. (Mareš. 1988:40-41.modified.)

The teachers are aware of the fact that it is impossible to reject the reproductive orientation. It has its certain place, for example in the very start of acquiring of new concepts, or when students learn definitions, special terms, etc.

- 3) orientation based on performance
- 4) out-of-school orientation

(ibid.)

4. 3. Learner’s conception of learning

The effort of the whole education process fails mostly because it does not reflect on the pupils’ conception of learning, it does not appreciate sufficiently their own way of thinking. Only in last 15 - 20 years the pupils’ concept of the subject matter has started to be researched systematically. (Mareš and Ouhřabka. 1992:91.)

Saljö classified the conceptions held by respondents in his interview-based study into five categories:

1. “Learning as a quantitative increase of knowledge.
2. Learning as memorising – by heart.
3. Learning as acquiring facts, skills and methods that can be recollected and applied when necessary.
4. Learning as making sense or abstracting meaning.
5. Learning as interpretation and understanding of acquired information in further practice.” (Mareš. 1988:60-61.)

As far as the university students are concerned, there are different conceptions of learning. (Mareš. 1988:33.)

4. 4. Motivation

There are two well-known types of motivation - external and internal. Less known classification, important for language learning, are for instance three types of motivation defined by Brown:

- *global motivation*: consists of a general orientation to the goal of learning a L2;
 - *situational motivation*: varies according to the situation in which learning takes place (the motivation associated with classroom learning is distinct from the motivation involved in naturalistic learning);
 - *task motivation*: motivation for performing particular learning tasks.”
- (Ellis. 1985:117. Modified.)

4. 5. Intelligence

Intelligence can be defined as “a factor which underlines our ability to master and use a whole range of academic skills.” (Ellis. 1985:110.)

The theory of multiple intelligences, proposed by Gardner, suggest that there are a number of distinct forms of intelligence that each individual possesses in varying degrees. The theory distinguishes seven forms of intelligence:

- *Linguistic intelligence*: these learners like to read, write and tell stories. They are good at memorising names, places, dates, etc. They learn best by saying, hearing and seeing words.
- *Logical mathematical intelligence*: these learners like to do experiments, figure things out, work with numbers. They are good at mathematics, reasoning, logic and problem solving. They learn best by categorising, classifying and working with abstract patterns or relationships.
- *Spatial intelligence*: these learners like to draw, build, design and create things, daydream, look at pictures, watch movies and play with machines. They are good at imagining things, sensing changes, mazes and reading maps and charts. They learn best by visualising, dreaming and working with colours or pictures.

- *Bodily kinaesthetic intelligence*: these learners like to move touch talk and use body language. They are good at physical activities and learn best by touching, moving, which is connected with learning.

- *Musical intelligence*: these learners like to sing, hum tunes, listen to music, play an instrument and respond to music. They are good at distinguishing sounds, remembering melodies, noticing pitches and rhythms. They learn best by rhythm, melody and music.

- *Interpersonal intelligence*: these learners like to have social skills, like to have a lots of friends, talk to people and join groups. They are good at understanding people, leading others, organising, communicating, manipulating and mediating conflicts. They learn best by sharing, comparing, relating, co-operating and interviewing.

- *Intrapersonal intelligence*: these learners are good in metacognition, they like to work alone and pursue own interests.

Guilford's theory about the structure of intelligence proposed about 150 different components of intelligence.

Learning and teaching should focus on the particular intelligences of each person. For example, if an individual has strong bodily kinaesthetic or musical intelligences, they should be encouraged to develop those abilities. Different intelligences strongly influence learning styles of an individual. (Gardner. 1999:934; www.tip.psychology.org/styles.html)

4. 6. Aptitude

Some people have better cognitive or linguistic abilities for language learning than others. Though it may be possible to help slow learners (for instance, by suggesting alternative learning strategies), some difference in learning rates is still likely to remain. The learners vary in their language aptitude. (Dickinson.1985:20) The term is usually defined on basis of the tests that have been used to measure it. These tests measure some components of aptitude.

Carroll and Sapon identify three major components of aptitude

- *phonetic coding ability* – consists of the ability to distinguish phonemes, perceive and memorise new sounds

- *grammatical sensitivity* – the individual's ability to demonstrate awareness of the syntactical patterning of sentences of a language

- *inductive ability* – consists of the ability to notice and identify similarities and differences in both grammatical form and meaning. (Ellis. 1985:112.)

Tricia Hedge¹⁷ adds fourth component – memory.

As far as language learning is concerned, aptitude is significant for student's success in the whole process, which could justify the individualisation (as mentioned in chapter 5.1). Thus, it is reasonable to test the level of aptitude components and predict the success of an individual to learn a foreign language. However, teachers should take into consideration that “the overall scores of the tests do not reveal all the different learning strengths and weaknesses among the components.” (Hedge. 2000:17.)

Geddes and Sturtridge claim that individual differences in second language learning have connections with similar individual differences in first language learning. “There are clear connections between syntactic aspects of first language development and the language analytic aspects of foreign language aptitude.” (Geddes and Sturtridge. 1982:137.)

5. PATH TO AUTOREGULATION

5. 1. Individualisation

The differences between learners are obviously present. Each learner has special needs. Now a question arises: how to approach the individual students? In classes of thirty students, education required certain standardisation. One of the ways to solve the problem can be individualisation.

Individualisation – “means simply that effort which has been made to meet the needs and preferences of an individual learner.” (Geddes and Sturtridge. 1982:1.) Tasks are modified for each learner according to his/her abilities. The aims of learning are stated, and the learners are working to meet them. It is assumed that the learner has been given some responsibility for his/her own learning, whether he/she is learning alone or in a group, with or without a teacher. There is space for children's spontaneity and creativity. Teachers create such situations which

enable learners to find optimal chances for own learning, they are seen as helpers and facilitators rather than installers of knowledge. The results of learning are measured according to the aim, possibly on the basis of learners' self-evaluation. (Skalková. 1999:212; Geddes and Sturtridge. 1982:1, 8.)

Some efforts for individualisation occurred already in 20' and 30', for example the Dalton plan, or the Winnet project. Nowadays, the inner differentiation is realised by means of various methods such as project work, solving of problem situations, games, drama and practical activities. The main aim is the variety and dynamics of activities.(Skalková. 1999:212-214.)

Some of the most frequent problems include teachers having too little time and limited resources to put into practice some of the ideas that are recommended. Similar situation arises when their learners are unmotivated, for the school or education system requires them to work closely to syllabus. Individualisation involves change of attitudes and organisation. (Geddes and Sturtridge. 1982:8.)

5. 2. Metacognition

Psychological researches find out that there are differences among people as to the efficiency of their learning. There are certainly several reasons but one of the most important is the ability to analyse own learning processes, to learn about them and search for optimal ways of their organisation and regulation. The term is called "metacognitive strategy". (Helus. 1995:80-82.; Mareš. 1988:169-70.)

Metacognition can be described as "cognition of one's cognition or learning how to learn". (Mareš.1988:169.) It starts to appear in early age of children when they start to ask questions concerning such topics as: "how to progress to master it, to understand it, to pass the exam" or make statements as "I find it difficult to remember grammar rules". (ibid.; Dickinson. 1987:34.)

These metacognitive interests are often undervalued and there is no systematic attention devoted to them. This may cause that children acquire a whole set of vices, which may later

become a source of failures in learning (the time and effort invested does not bring relevant results), helplessness in questions: “how to learn this”, lost of interest and resignation. It regards also students possessing better-than-average intelligence. (Helus. 1995:82-84.)

Metacognitive strategies include learner’s abilities to analyse his/her own dispositions for successful learning, and, on the basis of this analysis, change own learning procedures. The result will be the usage of procedures that are suitable for the particular learning situation and one’s own learning style. (Švec. 1998:48.)

The core of metacognitive strategies is self-reflection. Student is not only able to describe but also evaluate the whole process of learning and then choose the appropriate future steps in acquiring new knowledge or abilities. (ibid.)

Learning a new subject, such as foreign language, may be largely a matter of developing metacognitive knowledge about it. Thus the learner has to discover what are appropriate learning strategies for him/her, which can be realised by following the teacher advises and trying various types of activities and strategies we know from other learning experiences. The results will be stored as metacognitive knowledge and the activity of trying them out will be metacognitive experiences.

Metacognition is a pre-stage of autoregulation.

5.3. Autoregulation

“The main goal of all the efforts of teachers, families and pupils themselves should be the gradual overtaking of pupils’ own development into their hands and taking the responsibility of its result. The aim is autoregulation of one’s learning.” (Mareš. 1988:171.) Linhart specifies the idea by the statement that the learners should develop their own style under the supervision of an educator, so that they gain the ability to control the correctness and effectivity of the chosen aim as well as the procedures leading to its achievement. The learner can be an initiator and manager of his/her own efforts. (ibid.) In literature, we can find other English terms of autoregulation, for example: self-regulated learning, self-directed learning,

self-guided, self-managed, self-controlled learning, etc. (Geddes and Sturtridge. 1982:2.; Dickinson. 1985:20.)

Techniques of autoregulation:

- *self-monitoring*: school learners can be encouraged to monitor their own learning. Either they can keep check-lists, or older students can keep a learning diary which could include a check-list, a self-rating on how well the items were learned
 - *self-correction*: students should be encouraged to take every opportunity to correct their own work
 - *variable pacing*: learners are working at their own pace, in groups and pairs, the teacher is not necessarily present all of the time
 - *use of content*: for instance personalising language practice
- trouble shooting*: helping the learner to become aware of his own problems by encouraging him to talk about them, students can record areas of difficulties plus the solutions in they lists and diaries.” (Čáp, Mareš, 2001:515-517.modified)

Students should always be given opportunity to take greater responsibility for their learning. This is easy to create with activities as group, pair and project work, but pupils can also take part in other, whole class activities. They can help the teacher specify their objectives and classroom rules; take part in presentation, when teachers elicit information; there can be “pupil-teachers”; students can also design their own learning materials; etc. This way their feeling of responsibility rises. (Dickinson. 1987:132)

Phases of student’s autoregulation

1. *Planning*. In the first stage of the process student concentrates on a particular aim, evaluates his abilities, and chooses proper strategies. Important factor is the level of inner motivation.
 2. *Action*. The second step concerns the actual process of learning: resistance to various distracting elements; self-instructions, self-monitoring and self-control.
 3. *Reflection and self-evaluation*. Student analyses the success or failure, reflects the results of learning, and starts the whole cycle once again by stating new aims, making new plans that lead to better results and more efficient learning.
- (Čáp, Mareš, 2001:510-512.modified)

Nowadays it is almost impossible to provide the learners with all the knowledge they will need in the future. Therefore, the education of the third millennium should be targeted mostly towards autoregulation and prepare children for lifelong learning. (Mareš. 1988:173.)

6. POSSIBLE WAYS OF COPING WITH LEARNING STYLES

The aim of this chapter is to map the sequence of decisions educational workers have to make in connection with learning styles. Questions as “What can we do with the knowledge about learning styles?” or “Do schools have the right to influence or change the learning styles of individuals?” will be discussed here. A well-arranged scheme is followed by detailed analysis.

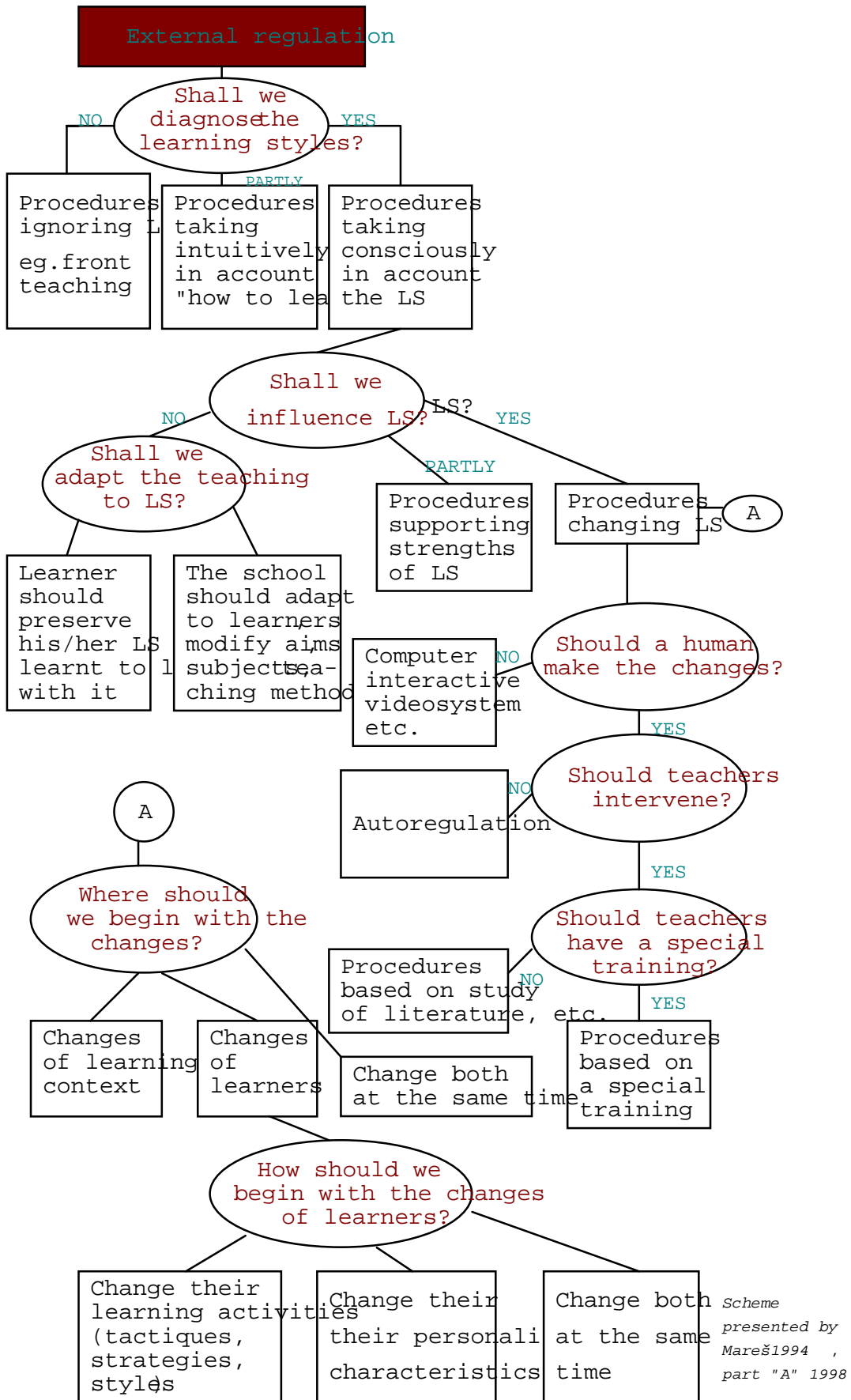
Mareš’s presented a scheme illustrates various approaches towards the problem of learning styles. (see page 28) The scheme consists of questions and answers and the following lines contain an in detail description of the scheme:

Learning style diagnosis:

Procedures ignoring LS. As Mareš claims, this is the current situation in our schools. The majority of teachers are not much familiar with the problem of learning styles and therefore they do not respect them. For example, some teachers use a lot of front teaching but rarely group work or pair work. If there is any individualised teaching, usually the learning styles are not respected anyway.

There are procedures taking intuitively in account “how to learn”. Some teachers are roughly diagnosing/uncovering the learning styles and thus they work with respect to them. These are the experienced teachers, who have been teaching for many years. They are for example able to support their learners in their strengths or analyse their typical mistakes.

Procedures taking consciously in account the LS. It would be the best if the whole school, the headmaster, school psychologist and all the teachers arranged a professional diagnosis of pupils’ learning styles. However, this paper will also present the situation concerning just the teacher and a class of students. (Mareš. 1988:132; Mareš. 1994:368)



Scheme presented by Mareš 1994, part "A" 1998

Learning style influences:

Learner should preserve his/her learning style and learn to live with it. The special terms for this kind of education are “learning styles-based education” or “learning styles informed instruction”, both are special types of individualised education. Teachers try not to change the styles of their students. (Mareš. 1988:136)

The school should adapt to learners, modify aims, subjects, teaching methods. The reason for not influencing learning styles may be the fact that teachers do not feel competent enough to interfere with the way their students learn (which may happen, as there is not enough literature describing the particular steps); another reason may be the learner’s style, which is not fully developed yet. There is also a danger of labelling, since pupils given particular labels can be blocked in their effort to broaden their potentials. (Mareš. 1988:131, 140; Mareš. 1994:370)

Procedures supporting strengths of learning styles. Entwistle and Ramsden said: “teachers should not try to change one’s learning style as far as it does not cause any problems to the learner.” (Mareš. 1988:131) Only if some components of learning styles cause problems to the learners, it is advisable to regulate them. (ibid.)

Procedures/strategies changing learning styles

Begin with changes of learning context. Jenkins thinks: “the energy invested in coping with the disadvantageous learning environment may reduce the energy necessary for learning itself.” (Mareš. 1988:131)

Begin with changes of learners. If the learner have reserves in his/her learning style or if it makes him/her complications, then it should be changed. The problem is that the source of complication is often it the school, for example, some teachers promote surface approach to learning. (Mareš. 1988:132.)

Begin with changes of both learning context and the learners at the same time. As Mareš claims, the whole conception of school, lessons, teaching, evaluation and assessment, teaching styles, personal approaches and changes in the character of classes would be ideal for better learning. (ibid.)

Begin with changes of learner's learning activities – tactics, strategies, styles. There can be various courses or workshops teaching or proposing them, students can choose what is the most suitable strategy for them. These strategies may be more useful if they are part of the target course. The advantage is that students can apply the new strategies right away in real tasks. (O'Malley and Chamot. 1990:184.)

Begin with change of learner's personality characteristics. There cannot be any permanent changes in one's leaning if the permanent changes in one's character are not present. (ibid.)

Begin with change of both learner's learning activities and personality characteristics at the same time would be probably the ideal situation. (ibid.)

Initiators of influences

Humans should make the changes. Special study materials, textbooks “for readers of all learning styles” start to appear on the market, including computer directed learning, interactive video systems, multimedia learning, which can create new learning environment and adapt to various learning styles. (Mareš. 1994:371-2.)

Teachers should intervene. Everybody expects the teachers to intervene – it is their job, but it can be also psychologists, pedagogues, parents, pupils' friends and others. The human element has the advantage, they can react to particular unique situations. However, those people are only helpers in the way to autoregulation.

Autoregulation. As mentioned above in chapter 5., the ideal situation is when the learner is able to make suitable changes of him/herself.

The teachers should have a special training. This would be an ideal situation but in the Czech republic there are no such courses. Teachers should be therefore thankful for the few sources of literature about learning styles and keep studying on their own. Let us hope that in the near future more publications concerning the subject of learning styles will be issued to provide us with new, detailed and profound information.

7. THE PRACTICAL SECTION

In the practical section an example diagnosis of learning styles will be carried out first. The appropriate research is aimed to guarantee the statement described in the chapter 3.1. It is followed by a discussion about the needs of each group of students in learning English as a second language, particularly with emphasis on vocabulary learning. Strategies which each group should be provided with during the presentation and practise of vocabulary will be discussed afterwards.

7.1. Statement

There is an assumption that:

- each examined class will include representatives of all the investigated learning styles
- there is no connection between gender and learning style
- there is no connection between school success and learning style
- older children will show better awareness of their learning strategies
- pupils possessing better school results will show better awareness of their learning strategies

The term “metacognitive knowledge” could be used instead of “awareness of one’s learning strategies”. However, the level of metacognitive knowledge would probably have to be measured in a differently aimed research.

3.2. Organisation of the research and characteristics of respondents

The research was carried out in June 2000 at Modřanská elementary school with the extended teaching of languages in Angelevova Street, Prague 12. Learning style profiles were gained from four classes of different grades (6th, 7th and 9th grades) and different abilities (two of classes were so-called “language classes”, attended by students with better school results, and two classes were “non-language classes”).

For collection of data the questionnaire method was chosen. A questionnaire from Richard and Lockhart’s “Reflective Teaching in Second Language Classroom” was used. (1994:75-77). Perceptual learning style preferences of pupils were tested, dividing them as visual, auditory, kinaesthetic and tactile learners; in addition it also investigated preferences for group and individual work. The learners responded to a number of questions concerning their study of English. They chose their answers from the following five point scale: strongly agree, agree, undecided, disagree, strongly disagree. The answers were evaluated by points which can be found in the graphs. An example questionnaires are to be found in the appendix A.

Mareš wrote: “Pupils usually do not think about their learning styles.” (1992:219.) This was confirmed by the investigated children. Most of the pupils admitted they have never thought about their learning preferences, neither they were familiar with the problem of learning styles. Therefore, they were informed about the peculiarities of each type of learners before they commenced with the questionnaires. This introduction not only helped them to think in the right way but also prevented them from misinterpreting some of the questions. For example, the question “When I work alone, I learn better” may have more interpretations: “When nobody disturbs me, I learn better” or “I really like to study by myself”.

The pupils were immediately informed about some strategies most suitable for each type of the learners. Then this reminder was carried once again at the beginning of the school year by their teacher. Students from the 9th grade could come to the school office and consult their results with their teacher. Considering the fact that for most of them this experience was the very first encounter with the term “learning style”, it is valuable to notice that eventually it made them think about the problem in detail, which may certainly help them in the future.

7.3. Interpretation of the results

The 6A class is a language class, the age of the children is eleven to twelve.

Graph A	Perceptual learning style preference					
Student	Visual	Audio	Kinaesthetic	Tactile	Group	Individual
A1	22	40	18	30	18	20
A2	16	46	42	44	42	30
A3	32	32	24	28	20	40
A4	14	28	22	22	44	10
A5	38	34	28	22	30	32
A6	44	30	36	44	34	28
A7	36	30	28	24	48	22
A8	26	36	28	28	38	24
A9	22	38	30	20	36	20
A10	50	24	46	44	22	36
A11	34	34	32	24	20	36
A12	28	34	28	18	32	30
A13	34	40	38	34	28	26

Major learning style 38 - 50

Minor learning style 26 - 37

Negligible 0 - 25

Some students showed preference for some type of learning, some of them have low scores in all the rows of the table. (A11, A12). On the other hand, some students have high numbers in many categories (e. g. student A2). The results indicate that it is still too early for a certain group of students to be aware of any learning style preferences at all. Chances are they will gradually realise the preferences in the future. From another point of view, the same results show that cannot be placed into any of the categories. Their learning styles belong somewhere in between those categories.

The graph also pictures one important connection. It is the connection between auditory learning and preference for group work. These learners can learn through listening to their classmates and get better use of their style than in individual work. For the same reason, it is assumed that the learners possessing visual learning style would prefer to work individually, doing reading tasks, going through texts. (Mareš. 1994:370-371.)

However, a lot of the children manifested greater preference for group work, regardless of their own learning preferences. This result may be influenced by the fact that probably not all the teachers use group work very often, so for the children this form of activity seems to be something exceptional, something rare and highly motivating. The next reason may be the influence of pupil's personality characteristics.

The same problem occurred with kinaesthetic and tactile preference for learning. The statements related to these types of learning were for instance: "I learn more when I can make a model of something" or "I enjoy learning in class by doing experiments". The idea of a model or an experiment is surely attractive for the pupils, so a lot of them have quite high scores in the middle sections of the table. Generally speaking, all the people remember more when they take active part in the learning process and get the chance to use more senses at the same time. For the kinaesthetic and tactile learners this condition seems absolutely crucial. Although this problem was presented to the tested group of learners, the eventual results again did not mirror the reality accurately.

Very similar results were manifested also by the other classes:

9A class

Graph B	Perceptual learning style preference					
Student	<i>Visual</i>	<i>Audio</i>	<i>Kinaesthetic</i>	<i>Tactile</i>	<i>Group</i>	<i>Individual</i>
B1	34	26	26	18	36	24
B2	40	28	28	34	32	28
B3	24	34	30	26	22	32
B4	28	32	30	16	38	28
B5	30	34	28	28	40	30
B6	38	20	26	20	26	36
B7	26	36	26	26	24	40
B8	28	42	34	26	40	20
B9	38	38	26	26	26	38
B10	24	50	36	20	26	50
B11	14	48	32	46	46	12

9CDE class

Graph C	Perceptual learning style preference					
Student	<i>Visual</i>	<i>Audio</i>	<i>Kinaesthetic</i>	<i>Tactile</i>	<i>Group</i>	<i>Individual</i>
C1	34	30	30	20	36	28
C2	44	36	46	34	46	36
C3	32	42	32	28	50	20
C4	48	32	24	20	28	42
C5	40	36	30	28	36	14
C6	44	34	30	32	30	42
C7	40	38	30	40	20	46
C8	28	34	38	16	30	28
C9	30	40	32	22	22	36
C10	20	44	30	18	30	24
C11	42	44	32	34	48	24

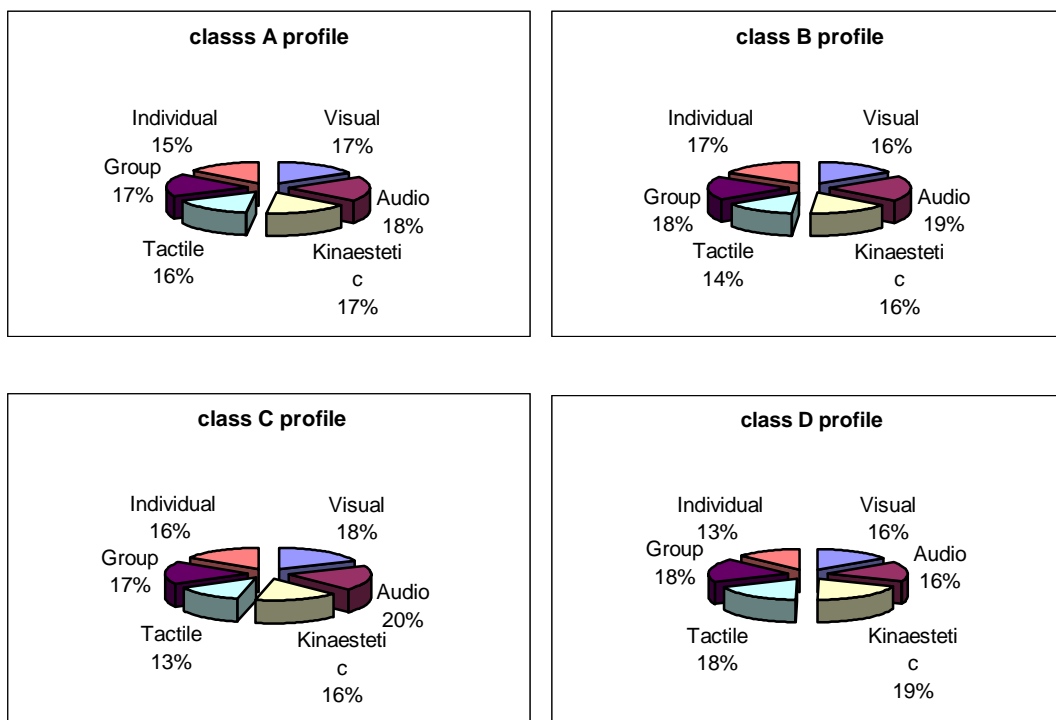
7A class

Graph D	Perceptual learning style preference					
Student	<i>Visual</i>	<i>Audio</i>	<i>Kinaesthetic</i>	<i>Tactile</i>	<i>Group</i>	<i>Individual</i>
D1	40	34	44	44	30	32
D2	46	30	36	34	36	36
D3	44	32	28	30	46	30
D4	26	42	42	36	26	26
D5	24	38	40	32	44	22
D6	25	34	46	44	46	24
D7	28	48	42	34	40	24
D8	26	28	42	44	38	30
D9	42	24	44	48	28	38
D10	34	10	32	34	40	10
D11	36	28	42	38	36	30
D12	30	34	40	50	50	16
D13	34	36	36	34	48	28
D14	26	38	42	34	24	30
D15	32	28	44	34	36	36
D16	22	34	36	34	36	20

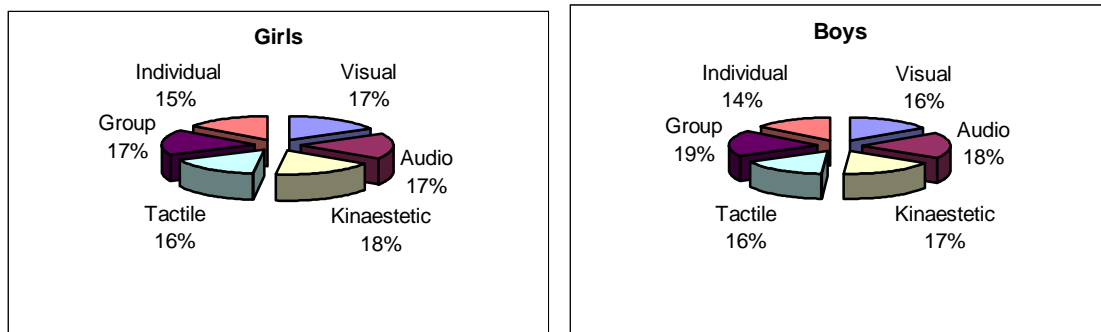
7. 4. Evaluation of the statement

7. 4. 1. *Each examined class will include representatives of all the investigated learning styles.*

The examined classes really manifested preferences for all the investigated learning styles. The graphs show that every style has almost the same amount of representatives. This is possible, since the styles often overlap.



7. 4. 2. *There is no relation between gender and learning style.*



The graphs show that there is no significant difference between the genders. This is also confirmed by Mareš (1988:118.) He conducted more detailed research concentrated only on the gender difference and gained results which did not appear the same as in research done for this paper. According to him, girls at elementary schools do not like tactile learning and experiments, whereas boys at elementary schools prefer tactile learning, they like to build and make things, and take part in experiments. He adds that this may be one of the reasons why boys have less interest in school learning than girls. Our schools maybe lack the proper methods of teaching (including various experiments, etc.).

Another statement of Mareš was confirmed by the research made for this paper. The biggest difference in the percentage was connected with the preference of group or individual learning. Mareš (1988:118.) stated that boys learn the best when there is an authority around, who can give them a piece of advice, if they need it. Girls do not need this authority, neither they need the help from their classmates or friends. They prefer learning alone, while boys do not.

When measuring the gender differences, factors like social and family background of the learners, and their conception of the role of men and women must be considered as well.

7. 4. 3. *There is no coherence between school success and learning style.*

Graphs in the chapter 7. 4.1. can be used to answer this question as well. “A” and “C” graphs represent the low level classes, whereas the graphs “B” and “D” represent language classes. Similar as in 7. 4. 2., there are no significant differences between successful pupils and pupils

with worse school results. Both groups have representatives of all the investigated learning styles, moreover, the percentage given to each of the styles differ only to negligible extent.

7. 4. 4. Older children will show more awareness of their learning strategies

Graph C and D in the chapter 7. 4. 1. show, that there is no evidence of greater awareness by the older pupils. A well-known fact is, that there are many high school, even university students who have got only low level of awareness about their learning styles.

7. 4. 5. Pupils possessing better school results will manifest better awareness of their learning strategies.

Once again, the children from language classes (7A and 9A) can be considered as those possessing better school results.

There is an evidence that learners with higher abilities are more aware of their learning strategies than children with lower abilities. (Švec. 1998:39.)

However, the thesis research did not confirm this statement. The reason is probably different focus of the main statement. For such a complex problem as the correlation between school success and awareness of one's strategies a special research would have to be undertaken.

7. 4. 6. Overall evaluation of the statement

The main assumption was guaranteed. There are differences between children as to their learning styles and class profiles usually cover all the learning styles tested. The profiles of the tested classes were similar. Further results showed no connection between learning styles and age or gender; and also between metacognitive awareness and age and school success. Separate researches would have to be done to guarantee these assumptions.

8. Discussion: Teaching with respect to learning styles

According to the Mareš scheme this paper reached the stage where teachers made several important decisions and chose one of the possible strategies, respecting and partially influencing the pupils' learning styles. Of course, the above research is only the beginning of the hard work that has to be done when one has chosen this way of coping with learning styles. The next step in practice would probably be repeating the research after a period of time, which will enable teachers to work with the children systematically, enhance the metacognition of their own learning styles and strategies. Teachers may keep records about the learners, and try to observe them in various contexts of learning.

Mareš also claimed that teachers need to change all their philosophy, if they want to start with the kind of teaching which respects various learning styles of their students. Even though the teachers will not change their teaching strategies dramatically, the new approach will always be present in the background. This will gradually lead to small but crucial adjustments in their work.

Teachers should analyse all the problems concerning teaching their subject and evaluate them from the point of view respecting individual learning styles. The problems would concern the teaching process as a whole, teaching language skills and subskills, organisation of the course content and organisation of the lessons.

As to the teaching process, teachers should evaluate different presentation and practice procedures and techniques which are suitable for majority of learning styles as well as the ways of explanations, instructions, test conceptions and evaluation.

As to the skills and subskills taught to pupils, teachers should evaluate procedures used in activities concerning listening, speaking, reading and writing, vocabulary, grammar, pronunciation and syntax (functions of language, topics and situations). This all has to be taught to pupils of all styles, of course. Teachers should also bear in mind the problem of learning styles while they choose textbooks.

Concerning organisation of the lesson, teachers can think ahead about learning styles when planning the lesson and thus include whole range of activities concentrating on various modes and skills. As to the organisation, teachers should give space for all patterns of interaction: individualised, pair or group work as well as full class interaction with the teacher. Teachers can think about all the aids that can be brought to the class to provide concrete experience to the pupils (models, pictures, realia, etc.), which is also suitable for multisensory approach. In the classroom teachers should respect individuals and their peculiarities.

It is not possible to write an all-inclusive manual for the teachers about all the above problems. Therefore, the following pages are a discussion about techniques and strategies teachers can use when teaching vocabulary at the second grade of elementary schools and respecting the students' individual learning styles at the same time.

8. 1. Teaching vocabulary with respect to learning styles

If we think about the ways of presenting the meaning of new items, we usually think about the nature of the words. However, this strategy has to be enriched with the knowledge of vocabulary acquisition. Tricia Hedge claims that "there is a lack of information from classroom studies as to which teaching procedures seem to enhance particular learning strategies and which strategies are effective for which aspects of vocabulary learning." Therefore "we need to review current methodology and materials and decide how best to exploit the ideas available with our own learners." (Hedge. 2000:125.)

Teachers have to create a repertoire of techniques and combine them according to their learners and the profile of the particular class.

Teachers' source inspiration may be books about vocabulary teaching (for example McCarthy's Vocabulary or Wallace's Teaching Vocabulary and others); and also general books about techniques of teaching, which often include whole chapters dedicated to problem of teaching vocabulary. (Penny Ur, A Course in Language Teaching).

4. 2. Presenting vocabulary with respect to learning styles

Visual learners probably profit the most from the traditional lessons. They take advantage of the fact that every course is based mostly on textbooks - they are learning directly from the text. Needless to say, some teachers stick to textbooks a lot. Almost all the teachers ask their

pupils to keep notebooks which are suitable mostly for the visual learners. Visual learners can profit from information written on the blackboard.

The following discussion will concentrate on those tactics that cater for more styles visual, auditory, tactile and kinaesthetic. The commonly used tactics can be changed only very slightly and yet the minor changes make a big difference in learning of all the pupils. Teachers should learn to combine presenting vocabulary not only by spoken word and text but include also the kinaesthetic and tactile element. In recent studies about vocabulary, discussions about the nature of words usually precede list of techniques that can be used for particular group of words.

Multisensory approach

Already Jan Amos Komenský called for the principles of object teaching and progress “from concrete to abstract”. All people remember more if they employ many senses: see, hear, say the word and touch the object if possible. This strengthens the association of the picture of object with the English word and it is important for learners of all the learning styles.

Visuals

Usually, the presentation is restricted only to hearing and seeing the word. The visual aids should be used whenever possible. Of course, their usage is restricted by the nature of the words and not very many words can be presented this way.

Visual aids include picture cards, illustrations from course books and supplementary materials, wallcharts, hand-drawn pictures, blackboard drawings, photographs, and also real objects, so-called realia. Realia combined with text may be useful as well - ie. maps, brochures, theatre tickets, menus, etc. Materials can be copied or projected.

The question for teachers is : HOW can we use visuals to cater for all learners of different learning styles?

There are many ways in which these aids can help to learn. For example, the tactile learners will profit from creating of visuals, such as drawing pictures, cutting and colouring paper, as well as touching real objects, moving them, using them in real-life situations, in drama activities and games.

Teachers can make use of the tactile of kinaesthetic learners if they need to draw something on the blackboard.

Usage of visuals can be combined with oral or/and written instruction so that these techniques can prove to be most profitable also for visual learners and auditory learners.

Peripheral learning

Wallcharts - usually a set of pictures that may illustrate family groups or grammar charts, may remain on the wall so that the subject matter becomes familiar to members of class. Peripheral learning is especially useful for visual learners. We may also make students study the wallcharts in class by making them discuss the pictures, or brainstorm for the appropriate words, like “Name all the red things”, etc.

Mime and gesture

If teachers present verbs by mime or gesture, they should use the present continuous tense, even though the learners are not familiar with it yet. Some adverbs can be also demonstrated (for example quickly, silently, etc.) This technique has motivation effect, as it is not - or cannot be - used very often. It is suitable for all styles, auditory learners hear the word as the teacher pronounces it when demonstrating the meaning, and visual learners probably benefit from the visual effect of from writing/copying the spelling down into their notebooks. For visual and kinaesthetic learners it would be the best, if they could move along with the teacher. For example, call them out to “open the window”, etc. Moreover, if we present vocabulary this way, we create a good ground for practice because all the class can get familiar with the activities and repeat them later automatically.

Vocabulary presented through text

One big advantage of texts is that learners can guess the meaning of the words through context. They will need this ability in the future.

Songs and poetry

An advantage is that learners gain suprasegmental features by learning longer piece of text. It also gives them feeling of achievement. This is one of the best ways to learn language for the auditory learners. If teachers add movement element into the activity, they reach value also for kinaesthetic learners.

Audio aids

tapes are part of every textbook. New vocabulary can be presented through listening activity. The advantage is the authenticity, native speakers' pronunciation. The listening is surely beneficial for auditory learners, meanwhile visual learners will have an opportunity to profit from the text which is usually accompanying the tasks.

Reading tasks

This is very popular way of presenting new words. However, we must remember that we should not present vocabulary just that way, as learners may see texts as source of words they do not know, and they would concentrate just on them and not the meaning of the text.

Of course, visual learners would profit from this technique the most, since this is the most suitable way of learning for them. They also profit a lot from extensive reading.

Tasks including tactile creativity

Tactile learners can in fact profit from each technique, if they are allocated with suitable procedures. One possible way of arranging the tasks for them is proposed in the example activity, chapter 7. 5.

The following techniques of presenting vocabulary are of the same importance and suitability for learners of all discussed learning preferences.

Translation

Translation saves a lot of time, especially in monolingual classes but there are many disadvantages: low motivation; low level of mental activity; danger of continuation of communication in mother tongue. Translation can be used to reassure guesses.

Dictionary

Tricia Hedge says that in class a monolingual dictionary can be used after all other strategies have been tried. 130 - this way we teach the children the appropriate sequence of strategies. A major advantage of dictionary is the learner's independence.

Penny Ur 62 offers techniques of presenting vocabulary to more advanced learners:

concise definition (as in a dictionary; often a superordinate with qualifications: for example, a cat is an animal which...)
detailed description (of appearance, qualities...)
examples (hyponyms)
synonyms
opposite(s) (antonyms)
collocation

When using these techniques teachers combine oral and written presentation of the words. At higher levels, there will probably be less possibility to vary the way of presentation as the words will be more complicated to demonstrate or visualise.

By that time learners could be trained in strategies which help them most to learn effectively.

4. 3. Techniques of practising vocabulary with respect to learning styles of learners

Receptive and productive vocabulary

Teachers have to specify to the students which words they have to master actively. Teachers in Czech elementary schools usually use textbooks that include lists of words to be learned for each unit. The learners should also be aware of "what it means to know a word actively".

Wallace (1982:27.) offers set of conditions:

- “- recognise it in its spoken or written form
 - recall it at will
 - relate it to an appropriate object or concept
 - use it in the appropriate grammatical form
 - in speech, pronounce it in a recognisable way
 - in writing, spell it correctly
 - use it in the correct collocation
 - use it at the appropriate level of formality
 - be aware of its connotations and associations”
- (Wallace.1982:27.)

Presentation form should always include: oral and written channel, preferably combined with a certain physical activity and tactile creativity.

Brainstorming

Brainstorming can serve as preparation for further activity, remind words, consequently use them in context, for instance in following activities.

Scenes and theatre

Memorising and acting dialogues in the lesson works with the advantage of putting words directly into productive vocabulary. It has also the advantage of breaking up the class routine, getting students out of their seats, and experiencing words in a variety of ways with aural and oral reinforcement. Scenes and drama activities are one of the best ways to learn/practise language for kinaesthetic learners. It is also advantageous for auditory learners.

Role-play

It is a similar activity to drama or scenes but it is less structured and gives more space for improvisation and more spontaneous oral practice of vocabulary. It imitates real life situations. Role-play is very suitable for kinaesthetic and auditory learners; the tactile learners may get the chance to touch or move objects during the activity. Visual learners can profit from the written dialogues presented in their textbooks or handouts.

Physical response

This technique of practice is in fact a parallel with mime and gesture presentation technique. Students revise by performing appropriate actions according to oral commands that use the new words. "touch your head, ears, knees...". This activity is the most suitable for kinaesthetic learners.

Games and competitions

Games and competitions can create a lot of situation for natural use of language, it deepens natural motivation to use words in context. Suitable situations for all styles can be created.

Essays

Essay writing, even writing short essays incorporating vocabulary to practice, has a big advantage in the productive use of the language. Therefore, learners of all discussed styles benefit a lot and of course, the visual learners the most.

Discussions - auditory

Discussions are one of the most popular way of learning for the auditory learners, as they profit a lot from listening to their classmates and the teacher. This technique is however disadvantageous if not all the pupils are involved. Teachers sometimes avoid discussions because pupils do not co-operate enough, or only very few of them do.

Translation

Translation technique is popular for being rather quick but does not require much effort from the learners, and has a low level of creativity. Moreover, there is the danger that the learners will continue to speak in the mother tongue.

Definition in English

Much more creative than translation, for example the kinaesthetic learners probably include gestures when they try to explain the words.

Projects

Projects give space for learners of every style.

Pupils write single words, phrases, sentences as a part of some activity - visual

Word charts and maps, including taught words

Pupils draw pictures, models, posters, - tactile, kinaesthetic

Notebooks

Notebooks relate to individual work of students. All of them have to practise vocabulary not only in the lessons but also on their own. Teachers can propose and encourage use of a variety of techniques and effective strategies for vocabulary learning and try to develop autonomy and independence by learners.





Effective strategies connected with keeping one's notebook can be trained in lessons. For example recording grammar or pronunciation irregularities; using pictures, charts, diagrams; writing example sentences relating to their personal experience; collocations; even hints helping students to recollect the words can be noted down. Scrivener 89 Other strategies: vocabulary cards, audio recordings, etc.

Textbooks sometimes incorporate instructions for learners to successful vocabulary learning. (see appendix D)

Teachers cannot always allocate learners with activities suitable for their learning style. There must surely be some reading activity done, even though the auditory learners may not profit from it too much, or on the other hand speaking activity, where the visual learners may benefit less. These abilities are nevertheless necessary for all the students. Pupils should develop certain range of skills to master all the activities.

However, if only those activities would be used that are not suitable for the learners, it could de-motivate them and lower their interest in learning.

8. 4. Table: Suitable activities for learners - summary

Learner type	Profit most from:
Visual 	Reading, seeing text – on the board in books and exercise books, slides, flashcards, video, images, maps or tables; colour highlighting to organise notes; visualising spelling of words or facts to be memorised; writing everything for visual review; keeping notebooks
Auditory 	Listening to teacher, lectures, projects with audio components; oral repeating the teacher; taking part in interviews, discussions, seminars, giving reports and speeches, talking and listening to classmates; listening to songs, using tapes with learning, verbally review spelling
Tactile 	Participation in class demos or simulations; organising class exercises; model building and “hands on” activities; drawing pictures; touching objects; board games (dominoes, etc.); laboratories
Kinaesthetic 	Participation in class demos or simulations; organising class exercises; drama with total physical response, role plays; miming and using gestures; field trips

4. 5. Example set of activities catering for learners of all styles: visual, auditory, tactile and kinaesthetic

As teachers at the Czech schools usually use textbooks, a discussion above one of the mostly used textbook will be proposed. Hutchinson's Project offers lesson plans (see appendix E) upon which a detailed analysis was based. The following passage contains lesson plans for two lessons.

The source and topic

Textbook: Project 1, pp. 57-58

Chapter: Project 5

Topic: CLOTHES, lessons 10 and 11

Vocabulary sets and structures: genitive 2 (comments will be just on the vocabulary set), singular and plural items of clothing (e. g. shirt/jeans);

Functions: Describing what people are wearing

Project: Make a fashion show

Aim of the lessons: pupils will have active knowledge of vocabulary connected with the theme "clothes" and will be able to use the words in context. They will be able to describe what people around them are wearing and use phrases they need for buying clothes in a shop.

Comments on the Project textbook:

The sequence of the activities in numbered, this is almost exact copy from the Project 1 textbook lesson plans. The comments about suitability for the various learner types are in the brackets in each line.

Lesson ten

- 1) warm up: revision of the previous lesson
- 2) Pupils look at the picture of washing line with clothes hanging. Words are next to it. (visual)
- 3) Ask: Whose clothes can you see? (genitive)
- 4) Play the cassette. Pupils follow in their books. (auditory)

- 5) Play the cassette again. Pupils listen and repeat.(audio)
- 6) Ask individual pupils: Are you wearing a jumper? Etc. Pupils answer: Yes, I am or No, I'm not. (auditory)
- 7) pupils look at the picture for one minute, close their books and then brainstorm words they can remember (visual learners will profit from seeing the words in the textbook, auditory learners will profit from the action of the competition)
- 8) Table of singular and plural items: (visual – write)
- 9) How much is this/are these jeans? (auditory; pronunciation and suprasegmental features)
- 10) chain (auditory; productive use)

It is obvious, that visual and auditory type of learners profited the most from this lesson. However, there can be just little alternations done within the activity. For example, during the sixth activity teacher can ask pupils to touch parts of the clothes they are talking about, which is beneficent for the tactile learners.

There should be more exercises placed which would cater for kinaesthetic learners. For example, pupils can move according to teacher's instructions:

“stand up everybody wearing trousers”, “all the people wearing jeans go to the window”, “pupils wearing a dress to the door...”(kinaesthetic and tactile learners)

More ideas catering for tactile learners:

A game: “touch a jumper, touch your jeans,...”

Homework: Tactual learners (or the whole class) can cut out clothes from paper, colour them and write the English word on the other side. This activity would be time-consuming to do in the lesson. At home, learners who like arts would have as much time as they want to devote to this activity. This could be done instead of or combined with Workbook exercise 8 (see appendix E).

The Project textbook also suggests homework: Pupils choose four people from the project cover collage (p. 49). They describe what the people are wearing. This is also a suitable activity even for tactile learners.

All of the speaking exercises are not only suitable for the auditory learners. Learners of all types must be supported in productive use of the language, all of them should be able to use it for communication.

Lesson eleven

- 1) warm up – pupils read their homework descriptions. Other pupils guess who it is.
(productive use – listening; visual, auditory)
- 2) The clothes shop – preparation (visual and auditory); ends up as role-play (kinaesthetic, tactile and auditory learners)
- 3) The fashion show – preparation (visual- writing, auditory – talking to their classmates)
- 4) project work – pupils prepare commentaries in groups (kinaesthetic and tactile learners: touching and manipulation with clothes; kinaesthetic learners can organise their group; auditory learners: talking and listening to classmates; visual learners: can prepare written form of the project)

Homework

- 5) project work: drawing or cutting out pictures to make a fashion show. Writing commentaries. (similar to previous homework project: see above, page 49)

The eleventh lesson catered for all the styles. All types of learners profit especially in the project work, where the learners gain greater freedom. Once again, it is upon the teachers, how they realise the activity. There can be just a common role-play performed (see exercise 2), with pupils sitting at the desks, or there can be a scene arranged with pupils dressed as shop assistants, customers with a lot of/little money; shops equipped with paper clothes (prepared at home) and realia; music; and pupils moving, touching things, choosing and buying clothes - acting as in real life situations.

9. CONCLUSION

The research results confirmed presence of a variety of learning styles possessed by the pupils. During the research it also emerged that the children were neither aware of the proposed problematic, nor of their own preferred learning style and strategies. However, there is an evidence that successful learners showed better awareness of their learning style and strategies than the less successful individuals. (Švec. 1998:39.) Therefore it is advisable for teachers to keep attracting pupils' attention towards the issue.

The aim of the practical section was to propose a set of procedures that teachers, teaching English at Czech elementary schools, can apply if they want to respect learning styles of their pupils and raise their metacognitive abilities.

It is necessary to state that the Czech teachers have a lack of sources they could use in the practice. There are no workshops or courses on learning styles problematic. The only publication - Mareš's "Styly učení žáků a studentů"- is rather theoretical. Nevertheless it can serve as an excellent outline of the learning styles problematic, moreover, it suggests other sources and includes an overview of the basic questionnaires used for learning style diagnosis.

In spite of the lack of sources, teachers can start to make certain changes even with the limited information gained from literature. On the internet, they can, for instance, find a suitable questionnaire and diagnose learning styles of their pupils. A disadvantage is that the questionnaires are not designed specifically for Czech environment and mentality, so cross-cultural problems may arise. Some suggestions for preventing such problems were again offered by Mareš (1988:chapter 3).

Children become more aware of their own learning style just by completing the questionnaires. The research proved that some of those questions the learners had to answer made them think about the problem for the very first time in their lives. The teacher's next steps then logically result in a long-term co-operation with pupils, discussions about the needs and suitable strategies for each type of learners.

In conclusion, it is convenient and useful for the teachers to be aware of the pupils' learning styles. This way they can understand their pupils better, respect them more and therefore fully develop their potential. It is also necessary to develop pupils' metacognitive strategies and lead them towards autoregulation, which is an essential aim of successful education meeting the needs of the 21st century society.

10. RESUMÉ

Předložená diplomová práce se zabývá individuálními styly a strategiemi učení. Ačkoliv se američtí pedagogové a psychologové touto problematikou zabývají již zhruba třicet let, u nás se s ní teprve začínáme seznamovat. Jednou z hlavních změn ke kterým došlo v průběhu devadesátých let je posun od tradičního systému výuky k výuce respektující osobnost žáka. Protože žákovský učební styl je jednou z individuálních charakteristik, kterými se žáci od sebe odlišují, je třeba aby se učitelé naučili jednotlivé styly svých studentů respektovat, dovedli odhadnout, co kterému stylu vyhovuje a na tom založili svou výuku.

První část práce pokrývá základní teoretické problémy týkající se individuálních stylů a strategií učení. V úvodu se zabývá terminologií, dále jsou popsány různé styly učení, psychologické rozdíly mezi žáky. Závěr je věnován některým termínům podstatným pro výuku směřující k autoregulaci a různým možnostem učitelů reagovat na individuální styly učení svých studentů.

Úvodní kapitola teoretické části je věnována vymezení pojmů: učební styl, kognitivní styl, učební strategie a učení. *Učebním stylem* se rozumí učební postupy jedince, opakující se chování, které žák dočasně upřednostňuje v situacích pedagogického typu, nezávisle na obsahu učení. S učebním stylem úzce souvisí *styl kognitivní*, který je charakterizován převážně jako stálý, „svébytný způsob vnímání a poznávání“ (Švec. 43), který je také nezávislý na charakteru pedagogické situace a obsahu učení. Někteří autoři považují tyto dva termíny za totožné. Český pedagog a psycholog J. Mareš, jeden z mála odborníků zabývajících se u nás styly učení, považuje kognitivní styl za vrozenou složku stylu učebního.

Učební strategie jsou postupy uplatňované žáky při plnění jednotlivých učebních úkonů. Učení je definováno z behaviorálního a kognitivního hlediska.

Důraz v teoretické části je kladen především na žákovské styly a strategie učení, a to z různých pohledů. Jsou popsány charakteristiky žáků zkoumané skupiny a jejich typické chování.

Následující členění jsou nejpodstatnější:

- První klasifikace rozděluje žáky podle jejich přístupu k učení. Zatímco *povrchový* styl se vyznačuje vnější motivací a nízkým porozuměním, *hloubkový* přístup k učivu naopak motivací vnitřní a vysokou mírou porozumění. I když druhý přístup je více žádoucí, mnoho škol nutí žáky k přístupu spíše povrchovému.
- Další klasifikace je založena na rozdílech v myšlenkových postupech používaných žáky při řešení neznámých problémových situací. *Holisté* zpracovávají učivo ve velkých celcích s určitým nadhledem, *serialisté* se zmocňují jednotlivých celků učiva postupně, krok za krokem. Ideální student by měl být schopen obě strategie kombinovat.
- Následuje členění je založeno na „Kolbově cyklu zkušenostního učení“. Každý z nás preferuje v dané době jeden z dále uvedených způsobů zpracování informací: konkrétní zkušenost, reflektující pozorování, abstraktní konceptualizaci, aktivní pozorování. Tomu odpovídají typy žáků: *akomodující, divergující, konvergující a asimilující*, (viz graf, kapitola 3.3.)
- Praktická část práce se zabývá členěním učebních stylů podle percepčních preferencí při přijímání nových poznatků. Rozlišujeme *zrakový, sluchový, pohybový a hmatový* typ žáka. (viz resumé str. 4.)
- Na základě kognitivních stylů definoval Knowles další čtyři styly učení. Žáci s *konkrétním* učebním stylem se rádi učí netradičně, preferují jak vizuální, tak auditivní zpracování zkušeností, rádi se fyzicky zapojují do aktivit. Žáci s *analytickým* učebním stylem upřednostňují individuální studium, a to hlavně řešením problémů, zatímco žáci s *komunikativním* stylem rádi diskutují s ostatními spolužáky, nebo učitelem. Žáci *orientovaní na autoritu* upřednostňují vysoce strukturované vyučovací hodiny, jsou závislí na učiteli jako na autoritě.
- Učební styly je také odvodit od typů temperamentu, přičemž základním zájmem pedagogů se staly studie introvertů a extrovertů.

- Učební styl se vyvíjí s věkem. Od jednoho roku do patnácti let jednotlivci spíše *získávají* zkušenosti a poznatky a preferují konkrétní poznávání. Přibližně od šestnácti do čtyřiceti let dochází ke *specializaci* v získávání poznatků, nejprve ve studiu, pak díky zaměstnání, neboť si jedinec nachází své místo ve světě. Od čtyřiceti let do konce života si lidé chtějí na jedné straně prohlubovat své zkušenosti, vědomosti a dovednosti, ale na druhé straně aktualizovat další schopnosti – období *integrace*.

Styl učení je pouze jeden z faktorů, který způsobuje rozdíly mezi jednotlivými žáky. Proto je další kapitola věnována těm rozdílům, které mohou mít úzký vliv na individuální styly učení. *Učební orientace* například ovlivňuje přístup k učení, o němž již byla zmínka. Například žáci s hloubkovým přístupem k učení se orientují spíše na smysl toho, co se učí, zatímco žáci s povrchovým přístupem pouze na reprodukci učiva. To vše také souvisí s žakovým *pojetím učiva*. Někteří žáci chápou učení jako získávání stále většího objemu znalostí, jiní žáci jako objevování abstraktního smyslu učiva, další jako učení nazpaměť, atd. Dalším diskutovanými termíny je *motivace, inteligence a vlohy*.

Jak bylo v úvodu resumé zmíněno, nejsou v současné době v našich podmínkách k dispozici studie o tom, jak konkrétně ke stylům učení přistupovat. Lze vycházet pouze z obecné diskuse o možnostech učitelů respektovat individualitu svých žáků, učit je sebepoznávání, rozvíjení vlastních potencialit a vést je k autoregulaci. Diskusi otevírá pojednání o individualizaci, která je základním předpokladem pro rozvíjení potencialit jedinců. Potom je vysvětlen termín metakognice, neboli schopnost „poznávat své vlastní poznávání“, kriticky jej hodnotit a tím dále rozvíjet své schopnosti. Metakognice je vlastně předstupeň autoregulace – žák sám řídí vlastní učení a přebírá za ně odpovědnost. Autoregulace je cílem snah všech pedagogických pracovníků.

Poslední kapitola teoretické části vychází z Marešovy studie o možnostech učitelů reagovat na učební styly žáků. Jsou zde zčásti zodpovězeny otázky jako: „Mají učitelé diagnostikovat učební styly svých žáků?“, „Mají je ovlivňovat/měnit?“, „Kdo by je měl ovlivňovat?“, „Kde začít?“ a jiné.

Cílem praktické části bylo popsat způsob, kterým se učitel může na základě studia literatury vydat, pokud hodlá respektovat styly učení svých žáků. Základem byl předpoklad, že se

nebudou měnit žákovské styly učení, jen možná v určité míře ovlivňovat vyučováním některých učebních strategií.

Cílem výzkumu bylo ověřit, zda složení žáků v určitých třídách odpovídá tomu, co bylo uvedené v teoretické části. Zkoumanými styly se staly styly spojené s percepčními preferencemi, tedy zrakový, sluchový, pohybový a hmatový typ žáka. Dále byl výzkum rozšířen o zkoumání žákovských preferencí pro samostatnou a skupinovou práci. Výzkum byl proveden na pražské základní škole dotazníkovou metodou, respondenty se stali žáci čtyř tříd, šesté až deváté.

Výzkum prokázal rozdíly v učebních stylech, každá třída měla žáky zastupující všechny zkoumané styly, profily jednotlivých tříd se téměř nelišily. Zvláštním jevem byly vysoké preference žáků pro pohybové a hmatové učení

Vedlejší cíle výzkumu byly zaměřeny na souvislosti mezi učebním stylem a pohlavím, školní úspěšností a vyhraněností žáků. Žádný vztah nebyl významně potvrzen ani vyvrácen. Pro uvedené oblasti by bylo nutné zorganizovat samostatný výzkum.

Součástí praktické části byla diskuse o respektování percepčních preferencí při výuce angličtiny. Protože nebylo možné v rámci diplomové práce vytvořit manuál popisující důsledky pro všechny oblasti vyučovacího procesu, diskuse byla zaměřena na vyučování slovní zásoby, a to tak, že první část se týká presentace a druhá procvičování slovní zásoby.

Výsledky praktické části diplomové práce lze vyjádřit v následujících odstavcích.

Zrakovému typu žáka nejvíce vyhovuje jak čtení, tak pouhé dívání se na text – v knize, sešitě, na tabuli. Tito žáci mají výhodu, že na českých základních školách se většinou učí podle učebnice. Při učení se slovní zásobě žáci nejen vidí nová slovíčka v učebnicích a většinou na tabuli, ale zároveň jsou povinni zapisovat si je do slovníčků, z čehož těží obzvláště uvedený typ žáků, neboť zapisováním se posiluje ukládání vjemů v paměti.

Dalšími možnostmi, jak žáky zrakového typu podpořit v učení shodným s jejich učebním stylem je používání méně tradičních typů vizuálních pomůcek, např. projekce nebo videa, což nejen poskytuje těmto žákům potřebný vizuální vjem, ale také zvyšuje jejich motivaci. Výhodné pro vizuální žáky je kreslit si grafy, tabulky, diagramy; barevně si podtrhávat v sešitech. Učitelé by měli žáky v těchto činnostech podporovat a trénovat je v jednotlivých

učebních strategiích. Dále je vhodné umístování zvětšených grafů a tabulek na stěny třídy, aby je žáci po delší dobu vizuálně vnímali.

Sluchový typ žáka se nejlépe učí poslechem – učitele, spolužáků, audio pomůcek. Tito žáci se v tradičních hodinách při vyučování slovní zásoby nejvíce naučí při trénování výslovnosti nových slovíček, a to nejen poslechem učitele, ale také ústním opakováním po učiteli. Nové učebnice také nabízí cvičení typu diskusí, interview, seminářů, podávání zpráv, což sluchovým studentům vyhovuje stejně jako veškeré sociální aktivity, kdy mohou komunikovat se spolužáky. Tyto způsoby jsou tedy nejvhodnější cestou procvičování slovní zásoby pro tento typ žáků.

Hmatový a pohybový typ žáků nacházel jen málo uplatnění v tradičním vyučování.

Hmatový typ žáka se nejlépe učí pokud může zapojit hmat. Učitel by se měl před každou hodinou zamyslet, jak tyto žáky ve výuce taktálně zapojit. Mohou se využít pro kreslení, např. na tabuli, kartičky, asistovat při výrobě pomůcek. Výhodná je manipulace s předměty – předvádět modely, dotýkání se reálných předmětů, atd. To by mohl být jeden ze způsobů presentace i procvičování slovní zásoby. Po procvičování samotné můžeme využívat stolní hry, počítač, nebo různé taktální činnosti v rámci projektů.

Na žáky pohybového typu by měl učitel převážně myslet, pokud potřebuje dobrovolníky pro inscenační aktivity, nebo názorné předvedení činností. Pohyboví žáci se také osvědčují jako organizátoři aktivit. Pokud lze slovní zásoba procvičovat metodou „total physical response“, učitelé by toho měli využít. Vhodně je používání mimiky a gest při presentaci, kdy následně žáci gesta po učiteli napodobují – např. při nácvičování výslovnosti. Pro procvičování slovní zásoby jsou pro tento učební typ nejvhodnější metody inscenační, jakéhokoliv typu, při kterých se žáci fyzicky zapojují.

V závěru praktické části jsou uvedené dvě vzorové hodiny zaměřené převážně na slovní zásobu - „Clothes“. Je zde proveden rozbor příprav na hodinu z učebnice Project 1. Hodiny jsou koncipované vhodně pro všechny diskutované typy žáků, angažují i žáky hmatového a pohybového typu. Žáci hmatového typu se uplatní při vypracovávání domácích úkolů – projektů, kdy žáci vystřihují a popisují obrázky, nebo při užívání předmětů (části oblečení) při inscenačních metodách ve třídě. Žákům pohybového typu nejlépe vyhovuje „role play“.

V závěru práce lze konstatovat, že by bylo vhodné, aby se i čeští učitelé zabývali poznáváním žáků z hledisek uvedených stylů učení, neboť by jim to přispělo k výběru speciálních metod učení podle typů vyskytujících se ve skupině vyučovaných dětí.

V důsledku toho by se vyučování stalo efektivnějším, protože by bylo zaměřené na vrozené dispozice žáků podle stylových typů.

Určitým nedostatkem je jediná spíše teoretická práce – Mareš, zaměřená ke studované problematice

Respektování stylů učení a dalších zvláštností jedinců, rozvíjení jejich metakognitivních schopností a vedení žáků k autoregulaci je nezbytnými kroky k učící se společnosti.

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Anotace	<p>Studie se zabývá učitelskými styly a strategiemi žáků a studentů. Teoretická část podává přehled nejběžnějších členění učitelských stylů, např. hloubkový/povrchový přístup k učení aj. Další kapitoly pojednávají o psychologických rozdílech mezi žáky, individualizací, metakognicí a autoregulací.</p> <p>Praktická část popisuje jeden z možných postupů, které mohou uplatnit učitelé, pokud se rozhodnou respektovat učitelský styl svých žáků.</p>
Klíčová slova	<p>učitelský styl, učitelské strategie, učitel, typ žáka, učení, vyučování, rozdíly mezi žáky, zrakový/sluchový/pohybový/hmatový typ žáka, individualizace, metakognice, autoregulace</p>

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