© XXI, Revista de Educación, 5 (2003): 167-180. Universidad de Huelva

The Significance of Innovative Approaches to Teaching in Primary School for the New Curriculum Implementation

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Este artículo aborda el significado de los enfoques innovadores de enseñanza en la reforma educativa impulsada en Eslovenia. El desarrollo de enfoques innovadores de enseñanza requiere un conjunto de cambios como, p.e., la introducción de una educación primaria de 9 años, reforma de los componentes del currículum, y consideración de los cambios que se producen por las diferentes necesidades y condiciones de vida en la sociedad moderna. Es posible implementar cambios solamente si aquellos que están comprometidos en el proceso educativo están dispuestos a cambiar. Prácticas rígidas de enseñanza pueden dar a los profesores un falso sentimiento de seguridad, pero hace imposible para ellos adaptarse a los nuevos requerimientos que los procesos de enseñanza y aprendizaje nos traen en la sociedad actual.

The implementation of innovative approaches to teaching requires a number of changes, i.e. systemic changes: introduction of nine-year primary education, reworking of the curriculum and syllabi, and the changes due to different needs and conditions of living in modern society. It is possible to implement changes only if those engaged in the educational process are willing to change. Rigid pursuing of old practices may give teachers a false feeling of safety, but in fact it makes it impossible for them to adapt to the new requirements for teaching and learning brought about by the changes in modern society.

1. Introduction

Slovenia is a young independent state: it gained international recognition in 1992. Previously, it was part of federal republic of Yugoslavia. With the disintegration of the old socialist system socio-economic changes occurred, and europeanisation and globalisation of the new society took place. The new state brought about new requirements for the economy and science, and changed the position of individual in the new socio-economic system; from group-oriented social reality the responsibility shifted to the individual. Instead of group decision making and shared responsibility for economic, political, health, cultural, and educational matters, the new state stresses the role of individual. Such profound socio-economic changes

inevitably touch upon every segment of society, and the field of education is among the most exposed. They require from the individuals ongoing engagement in critical dialogue and information seeking, as well as continuous professional development, which all enable them to react quickly and effectively in private, professional, and social life. To initiate change in the area of education, it is essential to start with changing the mind set of teachers, and above all to reform the conception of knowledge in teachers and the society as a whole. Due to the above changes caused by the establishment of the new state, the educational system, especially at the pre-university level, has undergone profound changes. This article presents in detail the background and some essential changes that took place in the decade after the proclamation of independence.

2. Previous educational system

The old education framework will be summarised at the following levels: educational system, school, school subjects, teacher, pupil, parents.

The Educational System

At the level of the system, the curriculum was designed by the expert groups appointed by the state, in which there were no practitioners. After the curriculum was designed, it was immediately implemented centrally and top down, without any previous testing. The curriculum was completely content-oriented, and only the general goals of education were specified. The orientation of the curriculum had a profound effect on teaching and teachers' attitude to their pupils, which will be explained in the continuation. The curriculum was used unchanged for 30 years, which is understandable in the context of the rigid and closed socio-political system. The uniform state system only allowed the use of different languages (national languages), in spite of the fact that the federal state was comprised of different nations with different languages, cultures, national history and religion; cultural, historical and religious changes were not taken into account. From the individual point of view, the good point was the possibility to change schools within the state without the necessity to meet additional requirements, because there were no differences in education programs between different ex-Yugoslav republics. The reason why such system of education could be relatively successful was due to the government's complacency and open resistance to any qualitative comparison with different education systems elsewhere. The process of curriculum implementation lacked one of the most important indicators of its suitability, external examination. That is another reason for incomparability of the old educational system with any others.

School

The curriculum had to be implemented strictly as prescribed, and the school did not have any autonomy. There was a strict system of control in place provided by the inspection, which had the authority to control the curriculum implementation at the level of the school as a whole, as well as at the level of individual school subjects and teachers. In case of any deviations from the prescribed program, the schools and individual teachers were obliged to correct the mistakes in accordance with the inspector's instructions. It has to be pointed out that there was no professional advisory assistance provided to schools or teachers.

School Subjects

The design and implementation of syllabi were also prescribed. The objectives were content-oriented. As a result, the instruction was based heavily on factual knowledge and required rote learning: it was efficiency driven. For each subject,

there was only one textbook available, and it was didactically designed at the level of isolated, unchanging facts, and not at the level of understanding or higher categories of knowledge. All these narrowed down the spectrum of different didactic approaches to choose from, the lecture-type instruction was the prevailing instructional strategy.

Teacher

The role of the teacher in the process of education was narrowed to that of a presenter (level of reproduction), he was not seen as co-creator of knowledge. Successful education was not judged only on the basis of student achievement, but much more by the external evaluation of the inspection. In-service teacher training was prescribed, which means that teachers did not have the autonomy to decide which training would be suitable for them. The above-mentioned closed nature of educational system was reflected at the level of teacher, school subjects, and school. Teachers from different schools did not collaborate: there were no opportunities for them to exchange their views and ideas, or to share their experience and seek collaboratively solutions to their common problems. The required formal education for a teacher was at a lower level than it is today.

Pupil

In the whole education system, a pupil was the least autonomous, influential and respected party. The education model was directed toward the pupil as a receiver of knowledge in the sense that teachers' reasoning and explanation were transmitted to the pupils. That means that teachers did not systematically encourage their pupils to develop thinking skills and problem solving skills, and they did not create opportunities for them to extend and refine their knowledge. The reproduction of what the teacher said, or what was written down, was all that was required from the pupils.

Parents

They were not directly involved in the formal education system. Their role in the education of their children was limited to a more or less passive observation of the planning and implementation processes.

3. Current Education System with reformed curriculum

3.1. System

The first changes of education system began in 1992 when the changes of the legislation in the field of education were first drafted, which means that the process of education reform started with the adoption of the first new laws defining the new objectives of education. The preparations for determining the new content of individual subjects and the curriculum started with the appointment of the National Curriculum Council and commissions for specific fields and subjects. The design of the new curriculum was based on the following guidelines:

- Goal-oriented curriculum design with the stress on the development of skills and competencies, and not just memorisation of facts.
- The international comparability of the curriculum; the international research results were taken into consideration, e.g. IAEP (International Assessment of

Educational Progress) and TIMSS (Third International Mathematics and Science Study).

- The introduction of new knowledge and skills, e.g. information technology and information processing.
- Legally prescribed external testing as one of the quality control mechanisms.

In the process of shaping the new curriculum, the representatives from all the levels of education were actively involved in different phases. The National Curriculum Council determined the fundamental aims of the change in the content of the curriculum. The commissions for specific fields (pre-school institutions, primary schools, grammar schools, vocational education and adult education) and subjects drafted the new syllabi, which were then reviewed by selected groups of teachers (study groups) who gave feedback based on their experience with the focus on the new syllabi applicability. In the next phase, the syllabi were redrafted taking into account some teachers' suggestions, and detailed argumentation was prepared to justify the decisions about which suggestions were taken into account and which were not. In the next phase, the second drafts were reviewed by all the teachers, and their comments were studied by the commissions for specific fields and subjects, who then prepared the third draft of the syllabi. These were finally reviewed by the National Curriculum Council and the State Council of Experts, and after their approval a gradual implementation of the new syllabi started in 1999/2000 on a selected sample of schools. It is expected that all primary schools will have implemented the new curriculum in 2003/2004, which will conclude the first part of transition from the old (eight-year primary school) to the new curriculum (nine-year primary school). Gradual implementation started in the new first and seventh grades. The reworking of the curriculum was followed by the restructuring of pre-service teacher education at university institutions (modules for the first cycle).

3.2. School

The curriculum changes were first visible in the prolongation of primary education, i.e. in the transition from the eight-year to the nine-year primary schools; the gradual implementation of the new curriculum required different lesson planning and models of instruction. Children start school one year earlier, that is at the age of six instead of seven, which brings new requirements regarding organisation, human resources, additional teacher training, etc. In order to meet the requirements of the new nine-year primary school, adequate staffing, physical and material conditions have to be provided. All these require allocation of sufficient funds to primary schools. According to the Organisation and Financing of Education Act, financial obligations are divided among communities as founders of primary schools, and the state; funds from the state budget are mainly meant for salaries, and communities provide funds for transporting children to school, investments in the primary education system, and for additional programs. The schools are left with a difficult task of providing funds for the material costs, e.g. the costs of the maintenance of school building, costs for the purchase of teacher materials and equipment, etc. In order to make the school ready for the implementation of the new curriculum, in addition to the provision of high-quality teacher training, it is important that the necessary teacher materials, textbooks and resources, and new information technologies are provided. The new curriculum gives freedom to the teachers to plan the ways to implement the specified objectives, choose suitable teaching strategies and approaches, and to organise instruction accordingly. But this freedom requires from the teachers and schools active engagement in continuous professional development and collaboration within the school and between schools. One of the mechanisms used for assessing the quality of school effectiveness is by the level of achievement in external testing. One of the important new practices introduced into primary school with the new curriculum is the practice of team teaching of first-graders by a class teacher and a pre-school teacher.

3.3. School subjects

The focus in teaching individual subjects has shifted from «covering the prescribed content» to «achieving the specified objectives» which are process oriented. This shift of focus is evident especially in a different approach to teaching, which is student-centred and takes into account individual pupil's way of cognitive processing and ability within the framework of his/her age. Consequently, different activities and tasks are used in the process of instruction to create opportunities for each individual pupil to reach the prescribed objectives. End-of-year external testing of compulsory subjects (mathematics and Slovene language) and three electives represents a starting point for comparisons between schools regarding certain aspects and types of knowledge achievement. A special innovation of the reformed primary school is external differentiation in the eighth and ninth grades, which means that classes are organised on three ability levels (minimal, basic and higher) in at least two subjects (mathematics and foreign language). Because there are different approaches possible to achieve the same objectives, alternative textbooks have been prepared for some school subjects.

3.4. Teacher

The new requirements for today's teachers brought by the reformed curriculum are numerous, from getting well acquainted with the new syllabi and understanding them well, to better lesson planning and different process of instruction, as well as the new forms of assessment. From the beginning of the educational reform, a special attention has been given to providing a system of continuing in-service teacher training, as well as a system of promotion to teaching titles, which brings a new financial stimulus to the teachers. The guiding principle of in-service teacher training is the requirements of the new curriculum (e.g. modules for teachers in the first cycle). The legal requirement as to the level of education has shifted from two to four year studies: all primary teachers have to have a university degree. In addition to externally supervised quality of instruction by e.g. inspection control, counselling, head teacher classroom observations, some new methods have been introduced, like e.g. the method of self-evaluation by means of teacher portfolio.

3.5. Pupil

In contrast to the traditional approach to teaching which saw a pupil in a passive role, the new education system considers pupils as important as other factors of educational process; already in the process of lesson planning, teachers have to take into account their pupils' different abilities and interests, as well as differences in their prior knowledge and expectations. Different dimensions of knowledge (cognitive, affective, psychomotor) are taken into consideration in teaching and assessment, as well as different levels of difficulty.

New models of instruction are pupil-centred and take into consideration the needs and abilities of individual pupils (e.g. constructivist approach); that is why we expect each individual pupil to realise his/her potential to the fullest. Encouraging pupils to problem solve and apply their knowledge meaningfully in new situations will contribute to their future success in personal, professional and social life. (See the chapter on Examples of Activities for Experiential Learning).

3.6. Parents

The reformed education and the changes that it brings have changed the role of parents, who have a different, more active role. Now, parents can be more directly involved in their children's education, and they can have a significant influence on the educational process and its results. Parents' councils can express their opinion

about annual school planning and its implementation. By contributing funds for extracurricular programs, they have a direct influence on the scope and quality of their children's education. All these add to their increasingly important role in supervising the quality of school and teaching.

4. Examples of activities for experiential learning

The old curriculum for eight-year primary school was designed in such a way that it informed teachers about the educational goals and tasks, it specified the content that was to be covered, provided instructions and clarifications and cited recommended references. Teachers were not provided with any didactic guidelines or recommended activities, and the goals and tasks were just written down without any specifications and requirements for implementation.

In the new curriculum for nine-year primary school, learning objectives are defined and accompanied with examples of activities, the content is suggested, and there are special didactic and subject integration recommendations. If we take the example of the first grade, under the theme Nature and me, the following learning objectives are specified:

- Pupils compare living organisms and their habitats, and gain understanding of themselves as part of the environment.

Recommended activities are:

- Gathering information, discovering, observation, investigation of living beings in their habitats around the school, at home, in the classroom.

The suggested content is specified as:

- Surrounding habitats and living organisms (choice of habitat: meadow, garden, orchard, vineyard, forest, park, still and continental waters, sea, farm).

The special didactic recommendations read as follows: The focus is on the direct acquisition of knowledge about living organisms.

The new curriculum does not prescribe the use of the obligatory textbook, but rather leaves it up to the teacher to choose among the available textbooks on the market. For the first grade, there are three science textbooks available at present. The textbooks differ mainly in the number of science activities and the activities to be carried out by the pupils. The textbook entitled Environment and Me contains the highest number of activities, which can be carried out throughout the entire school year. It enables the pupils to use all their senses: they are encouraged to observe, classify, count, measure, weigh, make notes, gather information, make inferences, communicate, use time and space relations, experiment, predict, formulate hypotheses, and monitor and explain variables.

All these activities enable the pupils to become familiar with the scientific research methods already at an early age. It is important to note, however, that although observation is a basic activity in science used as a starting point for development of more demanding forms of research, other activities have to be used as well in order to meet the various needs of children. Early primary children have to use their hands, hold, carry, cut, knead, and colour. In this way they co-create the instructional process and through it their knowledge. If we want to encourage children to investigate, it is not enough to use the pictures of objects. Rather, concrete objects have to be available so that children can take them in their hands, observe them from different angles, touch, smell, and even taste them if possible, in order to discover similarities and differences. The shift from traditional way of teaching can be achieved by making such activities the new element of instruction; they change the role of the teacher and make the pupil a co-creator of his knowledge.

5. A shift from traditional model to the process-oriented and life-long learning approach

5.1. Teaching, learning, assessment, knowledge

The process of planning and implementation of change into the pedagogical practice requires practical application of innovation after the curriculum has been reworked. There are a number of factors which determine whether the above is successful or not. Among the most important factors are personal constructs and meanings concerning the conception of knowledge at the level of the individual and wider society. The transformation of traditional conceptions and theories about knowledge and its role in different areas of life has guided many changes toward more successful and more effective adaptation, creation and communication of an individual in his personal and professional life. Individual theories about the conception of knowledge differ, which has important influence on the ways individuals think about teaching and learning.

The primary objective of reworked program of education is therefore training individual learner to acquire basic learning skills and strategies, like e.g. effective problem solving, communication, collaboration, and critical thinking. Recent theories define teaching as the process of training learners for independent judgement, effective communication, posing questions, investigating, cooperation, experimentation, and problem solving. Learning is defined as the process of active construction of knowledge and development of thinking structures which is influenced by the internal (physical) and external (natural and social) environment, and which enables the individual to understand facts, phenomena, events, and laws. Throughout the learning process, students should be enabled to experience, investigate, discover, experiment, and problem solve, and teachers should create opportiunities for the learners to do so by structuring and organising activities, as well as assessing their progress and analisying their performance in collaboration with the learners.

5.2. Definition of traditional model of teaching and assessment in our pedagogical practice

According to the traditional theories, which still prevail in Slovenia, teaching is a transmission of content, its scope is prescribed in advance. Assessment comes at the end of the teaching process and serves the purpose of measuring how much transmitted knowledge has been memorised. Such assessment practice does not provide learners with the information about their real knowledge, their strong and weak points, and above all, it does not provide them with the opportunity to use their knowledge meaningfully and sensibly. The implementation of the new curricula requires new approaches to teaching, and places the learner in the position of an equal and active partner in the learning process. All these have brought teaching and assessment closer together. Assessment has gained new meaning, which is felt already in the process of planning instruction. Defining learning outcomes and forms of assessment together with other elements of instruction, and not after the instruction has been finished, places learners' successful performance in the context of the teaching process. Formative assessment of learners' growth becomes more important than individual test scores. Modern approaches to teaching are used more and more often, like e.g. constructivism, which conceptualise teaching and learning as one and the same process, and builds on the learner's prior knowledge to encourage him to (re)construct, transfer and apply the acquired knowledge.

Traditional approach to teaching relies heavily on the timetable and is content-focused. Consequently, it neglects the learner as the subject of the learning process.

Thus the prevailing instructional strategies are the verbal method and lecture-type instruction. In our pedagogical practice, teaching ex cathedra or the transmission model still prevails. Using the above mentioned instructional strategies enables the learner to acquire only lower categories of knowledge (cognition), and mostly does not allow the acquisition of process-oriented objectives, i.e. skills and competences, critical thinking, independent judgement and meaningful use of knowledge.

The teacher's and the pupil's role are established in advance. The teacher is the only source of knowledge and information (transmission of knowledge), and the pupil is the receiver of verbally described facts, events and phenomena.Too often, pupils are overwhelmed by the large extent of the content, and they are unable to memorise all the received information, let alone develop understanding. Since pupils usually do not have any experience of what the teacher tells them, their ideas and concepts that develop while the teacher explains are often completely different from those the teacher knows and expects from his pupils. The logical consequence is piling up of discrete facts and skills that have no meaning for the pupil beyond the school walls.

The traditional approach to teaching puts the teacher in charge of the content and the teaching-learning process. The learner is mostly a passive listener who mechanically writes down information received from the teacher. This approach is therefore suitable and efficient only for giving directions to pupils, introducing new content and summarising; it enables the teacher to work with a large group of pupils. The work of the teacher and of the pupils start and finish at the same time. The disadvantage of such approach to teaching is mainly the fact that the teacher has no insight into the quality of knowledge acquired by individual pupils, and that the learners have little opportunity for active collaboration in the learning process which is not in favour of higher-level processes in learning.

The main shortcomings of the traditional approach to teaching in comparison with modern approaches are:

- Lack of encouragement of divergent thinking.
- Development of lower categories of knowledge.
- Low learner motivation.
- The focus on result of learning and not on the process.
- Heavy reliance on the teacher as the only source of knowledge.

The advantages of modern approaches are:

- Active engagement of learners in the learning process.
- Holistic development of knowledge, skills and communication.
- High learner motivation.
- The use of autonomous learning methods.
- Holding learners responsible for their results.
- Building on learner's needs and experience.

The instruction is based on the curriculum and is influenced by learning outcomes, content, didactic system, organization, technology, environment and all the participants of the education process.

The choice of the teaching model, i.e. methods, strategies, procedures and techniques, should be made according to the desired outcomes of instruction, learner ability and his prior knowledge, and planned assessment methods.

In the traditional approach, assessment of learner achievement is not perceived as a simultaneous evaluation of teacher's work. This is the reason why there is

almost no washback effect of assessment on instruction, and as a rule, the changes in instruction design and implementation are not due to the results obtained by assessment.

The so-called reinforcement or repetition is usually just adding new content with the aim of explaining and repeating the information that has already been disseminated. This approach to teaching and assessment has no effect on learner understanding.

5.3. Outcomes of instruction as the starting point for planning instruction and assessment

Learning outcomes define changes in learner thinking, performance, attitude, standpoint, emotions and feelings that teachers plan to achieve. These changes should be reflected evenly in cognitive, affective and psychomotor areas of learner's developing personality. Learning outcomes are defined as achievement targets of knowledge and skills.

The main problem that the teachers are faced with when planning instruction is defining learning goals:

- Learning objective as a concrete, directly realisable goal.
- Operational objective as a concrete goal defined with an activity (operation), which serves as evidence of learner's achievement of desired objective (Požarnik 1988).

In order to make sure that the planned objective has been achieved, it is recommended that the following criteria be observed (the so-called Mager's operational triom):

- Whether pupil's performance is described with a suitable verb.
- Whether the evidence of achievement has been defined.
- Whether the criteria have been designed to determine the quality of the achieved knowledge and skills.

Effectively defined learning goals should be neither too general nor too specific. According to Linn and Grondlund (1991) the following questions should guide teachers when defining learning goals:

- What are the intended outcomes of instruction?
- Are the defined outcomes in accordance with general educational goals?
- Are the defined outcomes in accordance with basic principles of current theories of knowledge, learning and teaching?
- Are the defined outcomes realisable with regard to the available time, technology, learner ability and prior knowledge?

Effectively defined learning goals assist teachers in:

- More detailed justification of general educational goals.
- Clearer expression of teaching aims.
- Better analysis of what has been learned.
- Cooperation with parents.
- Providing feedback to learners.
- Individualised approach to teaching.
- Planning changes and improvements.

Day by day preparation of teachers for instruction is aimed at detailed planning of all the elements necessary for successful delivery, from learning goals, content, organisation, didactic system, to resources and facilitators. Teachers use different methods for writing their preparations:

- More detailed analysis of content specified in the curriculum.
- Operationalising the goals specified in the curriculum.

In the case of the latter, they usually define specified goals with suitable verbs, which explain what the pupils will learn and be able to do once they have achieved a specific goal. Such verbs are for example: observe, measure, write down, compare, use, evaluate, etc.

- Among the most current approaches to instruction design is the following three-step model adapted from G. Wiggins and J. McTighe (Wiggins, McTighe 1999):

  Step 1: Defining the lifelong learning knowledge and skills that we are planning to achieve. What is essential, what is basic? The planning process of the first step should be guided by the goals specified in the curriculum.

  Step 2: Defining the forms of assessing individual learner growth; planning the tasks, criteria, and expectations to assess whether the performance targets have been achieved.

  The choice of tasks or planning the assessments guides the teacher and the teaching process. The teacher's decision about the forms of assessment will influence the choice of the instructional strategy.

  Step 3: Applying the previous two steps by specifying the instruction process: what to do in instruction, how to sequence the unit, how much time will be used for individual activities, etc.
- Which lifelong learning knowledge and skills will the teacher plan for the learners to achieve?
- How is he going to motivate his learners?
- Will the instruction be process-oriented and will require problem solving from the learners?
- Activities for developing basic knowledge and skills will be complemented by more demanding activities for achieving objectives at different levels and within different subjects.
- Choice of subject specific authentic tasks and questions for assessment purposes.

See the chapter: Example of a teacher's instruction plan following the three-step model.

5.4. Assessment and grading

Assessment of knowledge and skills is an essential component of teaching and learning process. Assessment provides feedback to the learner about the effectiveness of his learning, and also to the teacher about the effectiveness of his teaching and of his pupils' learning. It is important that the teacher plans assessment simultaneously with other elements of instruction.

Holistically, assessment is aimed at:

- Teacher's self-assessment (teachers asses the effectiveness of their work).
- Pupil's self-assessment and self-marking (pupils are informed about the learning objectives, become more critical toward their work, and assume responsibility for their learning).

- Teacher's assessment and marking of pupil's performance and achievement.

As an essential part of the teaching process, assessment directly affects both, teaching and learning. Assessment has a diagnostic and motivational function, and marking has the function of obtaining a mark. When marking, teacher has a role of a decision-maker; his decisions have to be in compliance with the requirements of the curriculum and the Regulations on Assessment and Advancement of Pupils in Primary School. The compliance with the rules and regulations is essential in order to provide equal opportunity for success to all pupils.

Continuous assessment is carried out day-by-day, and teachers note down the information about their pupils' performance in normal classroom conditions over a period of time. The aim of continuous assessment is providing feedback to pupils for more effective learning.

In the framework of the system of transition between individual levels of education (from primary to secondary school, and from secondary to post-secondary and higher education levels), marks serve as an important selection element.

The fact that teachers lack theoretical and practical knowledge of assessment design and implementation represents a special problem.

The implementation of systemic changes in the area of education has influenced the role of parents, who can now follow more closely and directly influence the education process and its results.

Assessment has become one of the most exposed elements of instruction in the communication between teachers, pupils and their parents.

5.5. The implementation of the process-oriented and lifelong-learning approach

Knowledge is a subjective psychological category, which cannot be directly established and measured.

Teacher directs pupil's cognitive processes by posing different questions. Some questions stimulate pupils' thinking skills, and others encourage experimental activities. By using suitable questions, teachers can stimulate pupils' thinking or practical activities at different levels of difficulty.

- To direct pupils' attention and to stimulate a concrete activity, simple questions with clear question words are used, e.g.: What can you see in the picture? What can you feel when you touch something?
- Questions related to quantity, measurement and counting: How many organisms can you see in the aquarium? How many millimetres is the length of the leaf? How many times does the great diving beetle come to the surface of the puddle to inhale?
- Questions related to connections, relationships, and comparisons: What are the main differences between reptiles and amphibians? Which mammal can fly? What is a common feature of all bacteria?
- Questions related to different phenomena: What happens if the level of ground water suddenly drops? What are the visible consequences of human interference with nature?
- Problem questions also include supposition: Can we compensate for the consequences of greenhouse effect? What can be done if the birth rate decreases in the future?
- Questions with «how» and «why»: How do you think fossils came to existence? Do you know how to use identification key for defining the plants? How do you use the data from the table to draw a graph?

5.6. Autonomous, self-directed learning (Kac-Koruniè 1997)

In order to engage learners in autonomous, self-directed learning, the teacher's role had to change from the one frequently envisioned in traditional conceptions of teaching. Effective teachers take time in the instructional process to get learners to actively engage in learning activities and start using different techniques and methods to become self-directed learners. The fundamental role of school is to encourage pupil autonomy, which is the basis of life-long learning. The teacher has to take enough time to get the learners repeat and consolidate what they have learned, as well as to assess their performance and mark their achievement. By choosing certain teaching strategies and approaches teachers get pupils to become effective learners who can use their time efficiently and who can self-assess their performance.

In order to produce such results, teachers have to acquire good theoretical and pedagogical knowledge.

Pupils are encouraged and led by the teachers to think in the following way: «I AM SUCCESSFUL IF I HAVE CONFIDENCE IN MYSELF», «I AM CAPABLE OF LEARNING AND I KNOW HOW TO BE A SUCCESSFUL LEARNER»

It is important that pupils:

- Follow teacher's instructions.
- Create their own vision of success.
- Plan time for learning.
- Become active participants in the instructional process in order to gain better understanding and retention.
- Follow the recommendations about continuous learning in order to avoid failure.
- Repeat and reinforce what they have learned.
- Seek additional explanations from teachers, textbooks, and other resources accessible to them.
- Write down key concepts to help them gain understanding.
- Use time off during instruction for activities that involve physical movement which help them relax.
- Respect the teacher's division of content into smaller units.
- Write down what they remember concerning the definitions that have to be memorised.
- Practise writing down what they have memorised.
- Perform experiments additionally by themselves in order to clarify the problem they are trying to solve.
- Use concept mapping for better organisation of concepts and their interconnectedness.

The reasons for gaps in pupils' knowledge can be found also outside school in different media, social environment, peers, etc.

The results of diagnostic assessment are often surprising for teachers. Important ideas and concepts, which are clear to the teacher, often turn out to be misunderstood by the learners. Unimportant as it seems, such misunderstanding can seriously jeopardise pupils' growth.

The results of testing should not be perceived as the absolute truth about pupils' performance. They reveal certain aspects of pupils' knowledge, but they do

not tell us anything about their other skills and personality traits. A test provides the information about a pupil's achievement, but we do not learn about the reasons for his results.

Diagnostic assessment should be used for:

- Finding out about learners' prior knowledge as a starting point for the instruction planning.
- Planning support for individual pupil and choosing optimum teaching strategies and approaches, tasks and materials.
- Decisions about the level of difficulty of the material to be learned and its interconnectedness.
- Decisions about the use of new teaching methods.
- Judgement about various factors that influence successful learning, e.g., school climate, learning materials, diverse ability of learners.

6. Conclusion

The new syllabi are being gradually implemented in a sample of schools. After two years of teaching according to the new curriculum in the first and seventh grades of primary school, the evaluation was carried out and the results have confirmed the need for the new approaches to teaching, and the difficulties teachers are experiencing when implementing the new syllabi.

The new textbooks mostly take into consideration the requirement for a different approach to teaching, which would encourages direct, experiential and life-long learning, and take into account different needs and abilities of pupils.

The important role for successful implementation of the new curriculum plays pre- and in-service teacher training, carried out by universities, National Education Institute, and other institutes.

Some teachers have already published articles in educational journals about their experience.

The implementation of the new syllabi is supported by the development work in different projects which look at individual elements of instruction.

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