EVALUATION OF STUDENT'S KNOWLEDGE AND ACHIEVEMENT LEVELS BY THE TEACHERS BASED ON B.BLOOM'S TAXONOMY

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Abstract: The research of this problem aims to find and bring out relevant results on teaching in general and also within it, the level of students' knowledge, all of which is based on different taxonomies, with special emphasis based on the taxonomy of B. Bloom.
Therefore, the teacher in the first place must have sufficient educational, social, cultural, pedagogical, psychological, axiological knowledge, and most importantly, the basis from which the learning process begins are the aims. If the aims of teaching are set correctly, clearly and precisely, successful learning can be eachieved to e grater extent. With successful learning comes successful assessment, where the teaching process and that of continuous assessment could be taken as two inseparable processes during the educational activities. The objectivity and professionalism of the teacher would be high and valid, respectively in the evaluation of knowledge and achievements of students.
Our focus on the chosen topic will be on the assessment of students' knowledge and achievements based on Bloom's taxonomy, and as the main reason is undoubtedly the current state of assessment problems, about the competencies in terms of professional capacity of teachers during the process of student assessment. This process includes a number of basic concepts which will be elaborated in this paper in more detail.
The purpose and rationale for choosing this research topic was from our need and interest in the development of the teaching and assessment process within students' knowledge levels and achievement, namely the actuality of Bloom's Taxonomy and its implementation in the teaching process while teaching and assessing students' knowledge, as a Taxonomy of great use in world-wide school practice.
This was the main reason and purpose of giving an overview of the situation in our schools and at the same time of the teachers and also the influence of the organizers of the teaching process, the compilers of the school curricula, regarding the implementation and assessment based on the knowledge levels of Bloom's Taxonomy.
In this paper, a total of 120 teachers from the primary schools of the Municipality of Tetova were included, 60 of whom were class teachers and 60 were subject teachers. We used the teacher survey as a technique for this research, and we used a questionnaire consisting of 20 questions as the tool of the research.
A special program for statistical analysis of data - SPPS ANOVA was used for data processing, where data was also presented by using tables and graphs, reflecting the situation in our schools based on the obtained results.
Keywords: Assessment, Knowledge Levels, Student Achievement, Learning Process, School, Teacher

1. B. BLOOM'S TAXONOMY (THE ORIGIN AND MEANING OF THE WORD "TAXONOMY")

The word "taxonomy" is derived from the Greek language (taxis; law, order and system - and nomos; law). Taxonomy is an accelerating classification system based on the description and ranking of the learner's activities in the three areas of learning: cognitive, emotional (effective) and psychomotor. It is a map of the objectives of education, it is a way of grouping things, and it is a hierarchy of data classification from the easiest to the most difficult.[2]
Overview of the categories-cognitive levels of Bloom's taxonomy: comprising these six levels: knowledge, understanding, application, analysis, synthesis, and evaluation.

2. LEVELS OF KNOWLEDGE ACCORDING TO BLOOM'S TAXONOMY

Bloom's taxonomy can help many professional teams during curricula design, that is, to define learning goals. Learning goals are very important because they drive the processes of learning, teaching and assessment.
In 1956, American psychologist Benjamin Blum, along with his colleagues, developed the classification of learning levels.
He noticed that in 95% of textbook questions, students are asked to think only at the lowest level, i.e. only to repeat the information. The learning levels that Bloom has classified over time have changed, i.e. the new version is formed from the old version.[3]

[2] https://www.merriam-webster.com/dictionary/taxonomy
[3] https://prezi.com/dzwgahqkdm8v/copy-of-copy-of-taksonomia-e-bloom-it-dhe-strategjite-mesimore/

Otherwise it is conveyed that Bloom's goal was to distinguish the level of knowledge and achievement of the students on the cognitive aspect, i.e. not to make a formal assessment, or without making distinctions and features among students, because we are all aware of the differences between students in terms of their intellectual, psychomotor, and emotional capacity, and it is for this reason that Bloom himself was of the opinion that individual differences between students should be taken into consideration, both from textbooks and teachers of respective subjects.

There are three domains of education, namely ways of learning, according to Bloom's Taxonomy and instructional strategies:

• Cognitive domain:
• Affective domain:
• Psychomotor domain:

3. IMPLEMENTATION OF BLOOM'S TAXONOMY IN THE TEACHING PROCESS

Bloom's taxonomy, and the areas that make up this taxonomy, can help many professional teams that design learning programs, that is, curricula to define learning goals in particular and in general to enhance quality and efficiency in the teaching process and enhancing the quality in the process of assessing students' knowledge.

Learning goals are very important as they guide the learning, learning and assessment processes. They also provide information to students and parents about what is expected of the lesson. The introductory part of the syllabus sets out the general goals of teaching in the subject, and these general goals, from the very denomination that is general, seem to be difficult for teachers to help them plan the teaching process. While on the other hand, concrete goals provide a description of teachers' expectations of what the student should learn, and guide the learning process along with his or her tasks and teachers helping him or her to work further with the students.

Concrete goals give results that students are expected to achieve from learning, so these goals are stated in the curriculum by defining concrete activities, where students demonstrate what they have learned (what they know or what they can do), and can directly measure their knowledge and assist the teachers in preparing the instrument for assessment.[4]

Therefore, we can conclude that learning goals can be classified into cognitive, effective, and psychomotor domains, because learning goals come from learning domains or fields. Moreover, it relates to what is also emphasized in the nine-year education concept of the education system which says "Curricula should be exempted from multiple factography and loaded content, and teaching goals should be shared and classified in the emotional, social, cognitive, psychomotor, and moral development of students ".

4. RESULTS OF THE TEACHER RESEARCH

Table No 1: Knowledge on Benjamin Bloom's taxonomy

How much do you know about the taxonomy of objectives - Benjamin Bloom' taxonomy?		**Teachers**	
		f	**%**
a)	**A lot**	**43**	**36%**
b)	**Partially**	**73**	**61%**
c)	**None**	**4**	**3%**
	Total	**120**	**100%**

[4] Чонтева. ж, (2010), Ocenuvanje na znanjata i sposobnostite na ucenicite so primena na Blumovata taksonomija, Skopje., pg 8

Graph for table No. 1

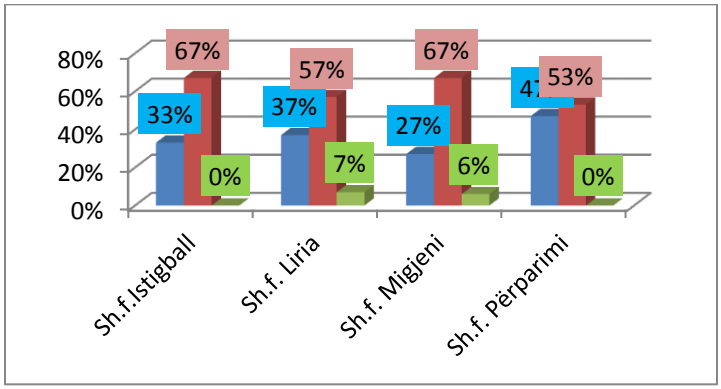


Table no. 2: Assessment of students based on knowledge levels

When assessing your students, are you based on the levels of knowledge of B.Bloom's taxonomy?		**Teachers**	
		f	**%**
a)	Always	**43**	**36%**
b)	Sometimes	**76**	**63%**
c)	Never	**1**	**1%**
	Total	**120**	**100%**

Graph for table No. 2

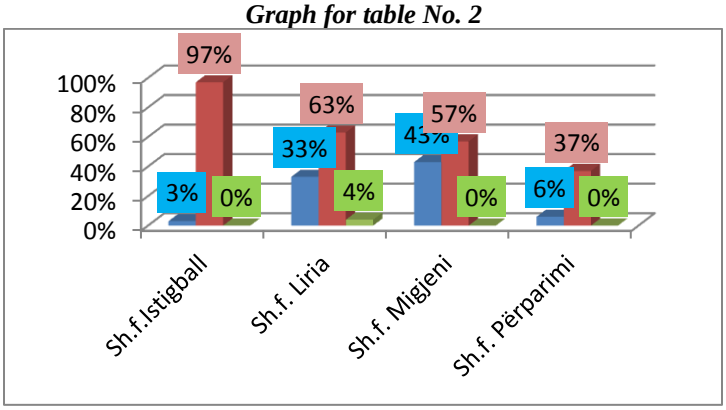
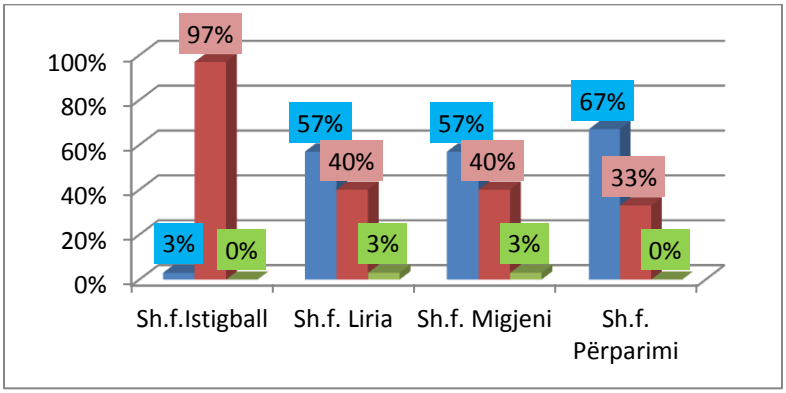


Table no. 3 : Deliberate question-asking, and quality of thinking

Does your deliberate asking of questions increase thinking quality based on cognitive levels of Bloom's taxonomy?		**Teachers**	
		f	**%**
a)	A lot	**52**	**43%**
b)	Partially	**66**	**55%**
c)	Not at all	**2**	**2%**
	Total	**120**	**100%**

Graph for table No. 3



5. RECOMMENDATIONS

• First, the teacher must lead, according to the standards and rules of the teacher's profession, to understand the importance and responsibility of the institution and society.
• Justice and professional and moral conduct must be present in all activities to assess student achievement.
• The teacher must be guided in his or her moral and legal responsibilities when assessing and evaluating student achievement.
• The teacher, while practicing his/her profession, must keep abreast of the latest achievements in pedagogical and educational theory and practice, and be even more motivated in this regard for his/her professional development and engagement of the wider spectrum of school activities.
• Teachers should engage in various trainings, especially in the area of assessing and grading students' knowledge.
• Teachers should also be trained in standards for student assessment as well as criteria for student assessment.
• Teachers need to be more transparent in assessing student achievement so that students are given more information about what the teacher evaluates.
• Teachers to be more informed and expand their knowledge of Bloom's Taxonomy, in particular on the taxonomy of knowledge levels.
• During the assessment process with students, to be based on knowledge levels according to Bloom's Taxonomy.
• When students give their answers on the knowledge gained from certain subjects, teachers should provide feedback on their achievements and on the acquisition of the material in the learning process in a timely manner.
• When assessing students, teachers should give them more information and guidance about the activity being assessed, i.e. how to work and how much time they have to answer the questions posed in one of the forms of assessment that the teacher applies.
• The teacher should not practice assessing and evaluating students at the end of a chapter, but to evaluate permanently and regularly, and not to practice repetition classes, but to evaluate at each class and at any part of the class teaching.
• Teachers should be objective in assessing and evaluating students' knowledge, and avoid frequent situations of bias, thus avoiding this habit that harms the student in particular, and other students in general by making selections between them.
• When asking students questions in the learning process, teachers need to consider not only how to ask questions and get answers from students, but also how much these questions raise the quality of thinking in students, as well as the quality of their thinking based on levels of knowledge.
• Teachers should, as much as possible, avoid situations where students are dissatisfied with the assessment of their knowledge, as well as during the learning process in general, which also affects the assessment of students.
• Teachers should use different forms and methods to improve the quality of student assessment and grading.
• Teachers should enable students to be included in the assessment of their knowledge and to take into account students' opinions in their assessment, to avoid situations where students display dissatisfaction.
• Practice self-assessment and self- grading.
• Teachers should keep personal records, keep records of student achievements during the learning process, so that their assessment is as complete as possible, have as much information as possible about the student, and thus have as much objectivity during the assessment as possible.

• Teachers should use different types and techniques of assessing and grading students in order to increase the quality of teaching.
• Teachers should use more types of assessment techniques when assessing students, as this will also make assessment more valid and accurate for measuring their teaching.
• In addition to evaluating students 'knowledge by the teachers, it is also important for teachers to assess students' needs, interests, desires, and skills.

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