Sakarya University Journal of Education, 3/1 (Nisan /April 2013) ss. 90-97.

The Analysis of Students' Skills of Asking Questions through Informative Texts*

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Abstract

In 9th grade Turkish Language and Literature lesson it is stated that students' skills of asking questions can be improved through informative texts. In this research the evaluation of students' skills of asking questions through informative texts is aimed. In this research survey model was used. The universe of the research is composed of 9th grade students of 2011-2012 academic year, and the sample is composed of 357, 9th grade students living in Hendek, Sakarya and going on their education in different types of high schools. In this research in order to gather the necessary data, Montaigne's essay "Human Nature". The students was asked to write 6 questions about the text and it was decided that the questions' of students belong to which step according to the Revised Bloom's Taxonomy and the difference according to the types of high schools was analyzed. The data was resolved by two researchers via SPSS 15.0 package program. It is important to reveal both for this research and future researches how much the ability of asking questions of 9th grade students' who finish primary education and start high school improve when an academic year finishes.

Keywords: Asking Questions, Informative Texts, Revised Bloom's Taxonomy.

Bilgilendirici Metinler Yoluyla 9. Sınıf Öğrencilerinin Soru Sorma Becerilerinin İncelenmesi

9. sınıf Türk Dili ve Edebiyatı ders kitaplarında bilgilendirici metinler yoluyla öğrencilerin soru sorma becerilerinin geliştirilebileceği belirtilmiştir. Bu araştırmada da dokuzuncu sınıf öğrencilerinin soru sorma becerilerinin bilgilendirici metinler yoluyla incelenmesi amaçlanmıştır. Araştırmada tarama modeli kullanılmıştır. Araştırmanın evrenini 2011-2012 eğitim-öğretim yılında öğrenim gören dokuzuncu sınıf öğrencileri, örneklemini ise Sakarya İli Hendek İlçesindeki farklı lise türlerinde öğrenim gören 357 öğrenci oluşturmaktadır. Araştırmada veri toplamak amacıyla Montaigne'nin "İnsan Hâli" adlı denemesi kullanılmıştır. Öğrencilerden metinle ilgili altışar soru oluşturmaları istenmiş, öğrenci sorularının Yenilenmiş Bloom taksonomisine göre hangi basamaklara girdiği belirlenmiş ve lise türleri arasındaki farklılaşmaya bakılmıştır. Veriler SPSS 15.0 paket programı kullanılarak iki araştırmacı tarafından da çözümlenmiştir. İlköğretimi tamamlamış liseye yeni başlamış olan 9. sınıf öğrencilerinin bir öğretim kademesi sona erdiğinde soru sorma becerilerinin hangi düzeyde olduğunu belirlemek bu araştırma ve gelecek araştırmalar açısından önem taşımaktadır.

Anahtar Kelimeler: Soru sorma, bilgilendirici metin, yenilenmiş Bloom taksonomisi.

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* This article was presented in WCLTA 2012 as an oral presentation.

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1. Introduction

Even if we may not be aware of them, the questions are inherent in life itself. How many questions do we ask in a day, which questions do we ponder about, do we reflect all the questions in our mind to the outside world? Or do we deeply analyze the questions in our mind.

Historical accounts of questioning used in the education process trace back to Socrates. One of the best examples of his use of questioning is found in Plato's The Republic. Socrates used a series of strategic questions to help his student Glaucon come to understand the concept of justice. Socrates purposefully posed a series of questions to help Glaucon reflect and think critically about the subject and eventually come to a new understanding of justice. This way of questioning became known as the Socratic Method. Today, teachers still use questions as one way to help students develop productive thinking skills and to understand concepts and topics (Tienken, 2009: 28).

Educators testify to the importance of students being effective questioners; however, teachers' behavior often belies this position. Much research on questioning has shown that the teacher, not the student, is the key questioner in the classroom. When students are encouraged

to ask questions, their questions reflect an overemphasis on specific knowledge of facts. Students have been conditioned to be content solely with finding out how many and when and who, rather than with identifying unstated assumptions, flaws in an argument, or meaningful relationships among data. Students have been conditioned to pursue knowing information rather than thinking about and truly understanding information. Students are natural questioners, commencing their educational experiences with high inquisitiveness. To build on this natural tendency to question requires an educational environment that facilitates students' questioning. Basic to creating and maintaining such an atmosphere is that both teacher and students express confidence in each other as people and as questioners (Wilen, 1987: 156-157).

Bloom's influential reforms are rooted in his structural analysis of intellectual development and, in particular, in his theory of types of thinking. He produced a hierarchical taxonomy of thought that begins with the particular and the practical and rises to the abstract and universal. His internally coherent and superficially persuasive taxonomy of human thought processes led to recommendations for pedagogical practice (Doughty, 2006: 3).

Requests were made to Dr. Lorin Anderson, a former student of Bloom's at the University of Chicago, to update the Taxonomy prior to his retirement. At the urging of publishers and education professionals, he agreed to the task, to reflect the enlarged understanding of the teaching and learning processes now available. He and co-editor, the elderly David Krathwohl, one of the editors of the original taxonomy, collaborated with seven other educators to produce the revised Taxonomy (Pickard: 2007, 46).

The original number of categories, six, was retained, but with important changes. Three categories were renamed, the order of two was interchanged, and those category names retained were changed to verb form to fit the way they are used in objectives. The verb aspect of the original Knowledge category was kept as the first of the six major categories, but was renamed Remember. Comprehension was renamed because one criterion for selecting category labels was the use of terms that teachers use in talking about their work. Because understand is a commonly used term in objectives, its lack of inclusion was a frequent criticism of the original Taxonomy. Indeed, the original group considered using it, but dropped the idea after further consideration showed that when teachers say they want the student to "really" understand, they mean anything from Comprehension to

Synthesis. But, to the revising authors there seemed to be popular usage in which understand was a widespread synonym for comprehending. So, Comprehension, the second of the original categories, was renamed Understand. Application, Analysis, and Evaluation were retained, but in their verb forms as Apply, Analyze, and Evaluate. Synthesis changed places with Evaluation and was renamed Create. All the original subcategories were replaced with gerunds, and called "cognitive processes." (Krathwohl: 2002, 214)

In the Turkish Literature textbooks used in high schools, there are many texts incorporated to improve students' question asking skills. 4th unit in the Turkish Literature textbook published by Fırat Yayıncılık for 9th grade can be a good example of this. In this unit, informative texts are used and what is expected from students is their gaining question asking skills. Hence, in this present study, 9th graders and as informative texts, essays were targeted.

The present study aims to determine at which levels do the 9th grade students construct their questions according to Revised Bloom's Taxonomy and whether these levels vary depending on the type of the high school.

The problem statement of the study is "At which levels do the 9th grade students construct questions according to Revised Bloom's Taxonomy?" In line with the problem statement of the study, a sub-question was constructed "Do the levels of the questions asked vary depending on the type of the high school?"

In this research survey model was used. The universe of the research is composed of 9th grade students of 2011-2012 academic year, and the sample is composed of 357, 9th grade students living in Hendek, Sakarya and going on their education in nine different types of high schools. In this research in order to gather the necessary data, Montaigne's essay "Human Nature".

For the questions constructed, descriptive analysis was carried out to determine their levels. The questions were analyzed by two researchers separately. In order to test the inter-rater reliability, a formula; Reliability = (The number of agreements) / (The number of agreements + the number of disagreements) (Miles ve Huberman, 1994) and the reliability was found to be %87.

In the scoring of the questions, scoring scale used by Aslan (2011) to analyze students' questions was employed. According to this scale, the questions that cannot be included in any of the levels are given 1 point, the questions that can be included in remember level are given 2 point, the questions that can be included in understand level are given 3 point, the questions included in apply level are given 4 point, the questions that can be included in analyzing level are given 5 point, the questions that can be included in evaluate level are given 6 point and the questions that can be included in create level are given 7 point (2011: 242). Moreover, some questions believed to have been erroneously designed were assigned 0. These questions can be divided into three: statements that do not have the characteristics of a questions, questions unrelated to the text, and questions repeating each other.

2. Findings

This part includes the distribution of the students' questions according to the cognitive processes steps and the findings related to high school variance.

Table1. The Distribution of the Students' Questions on the Steps of the Cognitive Processes

CATEGORIES & COGNITIVE PROCESSES	ALTERNATIVE NAMES	f	%
1. REMEMBER – Retrieve relevant knowledge from long-term memory		301	15.57
1.1 Recognizing	Identifying	66	3.41
1.2 Recalling	Retrieving	235	12.16
2. UNDERSTAND – Construct meaning from instructional messages, including oral, written, and graphic communication		1259	65.10
2.1. Interpreting	Clarifying, paraphrasing, representing, translating	504	26.07
2.2. Exemplifying	Illustrating, instantiating	67	3.46
2.3 Classifying	Categorizing, subsuming	36	1.85
2.4 Summarizing	Abstracting, generalizing	314	16.24
2.5 Inferring	Concluding, extrapolating, interpolating, predicting	51	2.64
2.6 Comparing	Contrasting, mapping, matching	25	1.29
2.7 Explaining	Constructing models	262	13.55
3. APPLY – Carry out or use a procedure in a given situation		2	0.10
3.1 Executing	Carrying out	1	0.05
3.2 Implementing	Using	1	0.05
4. ANALYZE – Break material into its constituent parts and determine how the parts relate to one another and to an overall structure or purpose		81	4.20
4.1 Differentiating	Discriminating, distinguishing, focusing, selecting	10	0.52
4.2 Organizing	Finding coherence, intergrating, outlining, parsing, structuring	26	1.35
4.3 Attributing	Deconstructing	45	2.33
5. EVALUATE – Make judgments based on criteria and standards		46	2.38
5.1 Checking	Coordinating, detecting, monitoring, testing	16	0.83
5.2 Critiquing	Judging	30	1.55
6. CREATE – Put elements together to form a coherent or functional whole; reorganize elements into a new pattern or structure		12	0.62
6.1 Generating	Hypothesizing	7	0.36
6.2 Planning	Designing	3	0.16
6.3 Producing	Constructing	2	0.10
Others		232	12.01
Total		1933	100

The students constructed total 1933 questions. %5.07 of the erroneously constructed questions are the ones not related to the text, %2.38 are the questions not having the characteristics of a question and %3.16 are the questions repeating each other. The percentages of the questions at each level are as follows: the questions having one point each and that cannot be included in any of the levels (%1.40), two point questions included in the remember level (%15.57), three-point questions included in the understand level (%65.10), four-point questions included in the apply level (%0.10), five-point questions included in analyze level (%4.20), six-point questions included in the evaluate level (%2.38) and seven-point questions included in the create level (%0.62).

Table 2. Distribution of the Students' Questions Asking Skills According to High School Type

Types of High School	N	Mean	sd
1. Anatolian High School	52	16.77	3.96
2. Anatolian Religious High School	60	16.77	3.05
3. Technical and Vocational High School	15	9.80	6.91
4. Trade Vocational High School	57	16.46	4.17
5. High School	22	11.68	4.92
6. Vocational High School	59	14.86	5.16
7. Anatolian Technical High School	23	15.22	4.74
8. Health Vocational High School	39	16.44	5.30
9. Technical and Vocational High School Girl	30	10.83	6.67
Total	357	15.16	5.20

When the students mean scores obtained for questions asking skills are examined, it is seen that the highest mean score was obtained by Anatolian high school students and they are followed by Anatolian religious school students and the lowest mean score was obtained by the students of technical and vocational high school.

Table 3. ANOVA Results Concerning the Significance of the Differences among the Students' Questions Asking Skills Depending on the Type of High School

Source of Variance	Sum of Squares	df	Mean Square	F	p	Significant Difference
Between Groups	1712.715	8	214.089	9.426	.000	1-3, 1-5, 1-6, 1-9, 2-3, 2-5, 2-6, 2-9, 4-3, 4-5, 4-9, 6-3, 6-5, 6-9, 7-3, 7-5, 7-9, 8-3, 8-5, 8-9
Within Groups	7903.862	348	22.712			
Total	9616.577	356				

The results show that there are significant differences among the students' questions asking skills based on the type of the high school they are attending $F(8, 348)=9.45$, $p<.01$. LSD test was conducted to find from which groups the differences stem from. The highest difference was found to be between Anatolian high school and technical and vocational high school and between Anatolian religious high school and technical and vocational high school.

3. Results, Discussions and Suggestions

At the end of the study, it was found that students' questions were mostly collected in understand and remember levels. In studies where Genç (2006) investigated high school students, Aydemir and Çiftçi (2008) investigated pre-service teachers and Keray (2012) investigated elementary school students, it was also found that most of the questions asked are from knowledge and understanding levels and students mostly asked low level questions. It was also found that the lowest number of the questions asked is at the

apply level. The same result was also found by Keray (2012) and Koray (2005). Moreover, it is highly interesting that the erroneously designed questions took the third place in our study.

Literature review showed that most of the studies analyzing the use of question asking skills focus on the courses (social studies, physics, literature etc.) given at high school or university levels by using survey method. The highest number of questions is from remembering and understanding levels. In their studies, Celilova (2006), Koç (2007), Durukan (2009) investigated the questions asked in textbooks; Kılıç (2010), Davis, Morse, Rogers and Tinsley (1969), Koray and Yaman (2002), Akpınar (2003), Karadüz (2009), Çolak and Demircioğlu (2010), Ayvacı and Türkdoğan (2010) investigated the questions asked by teachers in exams; Can (2006), Khan and Inamullah (2011) investigated the questions asked during the lesson by teachers; Baysen (2006) investigated the questions asked by teachers and answers given by students during the lesson. These studies revealed that the highest number of questions asked in textbooks, in exams, during the lesson by teachers is from knowledge and understanding levels. In light of these findings, it can be argued that the reason why students' questions are from lower levels may be due to their being directed towards such questions by textbooks and teachers. Students' mostly encountering with low level questions may have resulted in their designing low level questions.

When the sub-problem of the study is investigated, it is seen that there is a differentiation among the different types of high schools and the highest mean scores are obtained by the students from Anatolian high schools. In his study where he compared general, vocational and Anatolian high schools, Can (2006) found that the students from Anatolian high schools have higher rate of questions from higher cognitive levels.

As a result, following suggestions can be made:

- It was found that the students could not develop their question asking skills adequately. The one who asks more questions in an educational setting should be the student rather than the teacher.
- At different exam levels and during the teaching of other skill areas, applications aiming to improve students' questions asking skills should be incorporated.

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Genişletilmiş Özet

Eğitim alanında kullanılan pek çok sınıflama vardır. Sınıflamalar içinde en fazla kullanılanı ise Bloom taksonomisidir. Bloom taksonomisi yıllardır birçok araştırmacı tarafından kullanılmış, taksonominin yenilenmesi gündeme gelmiş, Anderson ve Krathwohl önderliğinde yedi eğitimciyle işbirliği yapılmış, taksonomi güncellenmiştir. Yenilenmiş taksonomi bilgi ve bilişsel süreçler olmak üzere iki boyuttan oluşmaktadır. Bilişsel süreçler hatırlama, anlama, uygulama, çözümleme, değerlendirme ve yaratmadır. Hatırlama basamağı tanımlama, anımsama; anlama basamağı yorumlama, örnekleme, sınıflama, özetleme, sonuç çıkarma, karşılaştırma, açıklama; uygulama basamağı yapma, yararlanma; çözümleme basamağı ayrıştırma, organize etme, irdeleme; değerlendirme basamağı denetleme, eleştirme; yaratma basamağı oluşturma, planlama, üretme alt basamaklarından oluşmaktadır.

9. sınıf Türk Dili ve Edebiyatı kitaplarında bilgilendirici metinler yoluyla öğrencilerin soru sorma becerilerinin geliştirilebileceği belirtilmiştir. Bu araştırmada da dokuzuncu sınıf öğrencilerinin soru sorma becerilerinin bilgilendirici metinler yoluyla yenilenmiş Bloom taksonomisine göre incelenmesi amaçlanmıştır. Araştırmada tarama modeli kullanılmıştır.

Araştırmanın evrenini 2011-2012 eğitim-öğretim yılında öğrenim gören dokuzuncu sınıf öğrencileri, örneklemini ise Sakarya İli Hendek İlçesindeki dokuz farklı lise türünde öğrenim gören 357 öğrenci oluşturmaktadır. Uygulama yapılan lise türleri Anadolu lisesi, Anadolu imamhatip lisesi, teknik ve meslek lise, ticaret lisesi, düz lise, meslek lisesi, Anadolu teknik lisesi, sağlık meslek lisesi, kız teknik ve meslek lisesidir.

Araştırmada veri toplamak amacıyla Montaigne'nin "İnsan Hâli" adlı denemesi kullanılmıştır. Bilgilendirici metinler grubunda yer aldığı için deneme metni tercih edilmiştir. Öğrencilerden metinle ilgili altışar soru oluşturmaları istenmiş ve öğrenci sorularının yenilenmiş Bloom taksonomisine göre hangi basamaklara girdiği belirlenmiş, lise türleri arasındaki farklılaşmaya bakılmıştır. Veriler SPSS 15.0 paket programı kullanılarak iki araştırmacı tarafından da çözümlenmiştir.

Araştırma sonuçlarına göre öğrenci sorularının en fazla anlama ve hatırlama basamaklarında, en az ise uygulama basamağında olduğu görülmektedir. Öğrenci sorularında lise türlerine göre farklılaşma söz konusudur.

İlköğretimi tamamlamış liseye yeni başlamış olan 9. sınıf öğrencilerinin bir öğretim kademesi sona erdiğinde soru sorma becerilerinin hangi düzeyde olduğunu belirlemek bu araştırma ve gelecek araştırmalar açısından önem taşımaktadır.