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EVALUATION OF WRITTEN EXAMINATION QUESTIONS OF TURKISH LANGUAGE IN ACCORDANCE WITH BLOOM'S TAXONOMY

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ABSTRACT

Problem Statement: The intention of this study is to determine whether written examination questions used in primary education fulfill their purpose in measuring students' verbal skills acquisition or not, whether the distribution of the written examination questions on the cognitive domain sublevels is balanced or not, and whether the examination questions reach target behaviors determined by the program or not. Purpose: The purpose of the study is to make a number of suggestions designed in accordance with the results of the research. The results will be obtained by means of a taxonomic distribution in the cognitive domain of the written examination questions used in measuring Turkish students' verbal skills acquisition, assessing the level of the questions used to reach target behaviors determined by the program, and determining teachers' measurement and assessment competencies. Method: The study has been conducted in 47 institutions of primary education selected from various socio-cultural districts in the Kayseri province. The written examination papers of 101 Turkish language teachers selected from the chosen schools have been collected. A total of 69 written examination papers have been randomly selected from the written examination paper samples belonging to the sixth, seventh, and eighth grades and 603 questions have been chosen for the analysis. These 603 questions have been examined using the qualitative research approach, document examination method, and the

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scanning technique. Findings and Results: The distribution of the written examination questions used in determining students' verbal skills acquisition in the cognitive domain sublevels is not balanced.

***Key words**: analysis, cognitive domain, taxonomic distribution of the questions, measurement and evaluation*

INTRODUCTION

Language acquisition depends on a child's cognitive, affective, and psychomotor development. Therefore, child language development in the primary education period must be defined by examining its cognitive aspect in order to provide a better understanding of the process (Yapıcı, 2004, p. 38). Students' levels of readiness must be carefully determined in order to provide them with a number of skills which match the corresponding levels. Students' cognitive competencies need to be determined so that future studies may be conducted at the desired level and succeed in achieving their goals. Therefore, written examination questions used in determining student success must be prepared in order for them to gain basic and upper level skills such as understanding, comprehension, interpreting, drawing cause and effect relationship, decision making, elucidation, arranging, questioning, solving problems, and they must contribute not only to the cognitive development of the students, but also to their affective and psychomotor development.

In a broad sense of the term, education involves making changes in human behavior (Baykul, 1992, p. 85). The basic objective of the measurement of students' performances in the process of acquiring knowledge and transforming it into behavior is to determine students' competencies and prepare them for the next educational level by alleviating their inadequacies.

The educational objectives in the measurement and assessment process need to be known. As a matter of fact, assessment is a tool used to investigate the extent to which certain objectives are accomplished and to decipher which objectives have not been adequately accomplished. Therefore, the prerequisite for writing test items (questions) for the objectives set at different levels is the classification of the objectives and educators' knowledge of the content of these objectives (Yılmaz, 2002, p. 313-314). Teachers must evaluate student success by means of both process assessment and result assessment in accordance with the classified objectives. When preparing written examination questions which are the most important tool of the result assessment, the classification of the objectives must be taken into account, the questions must cover the given subjects, and the examinations must have the content validity feature. In the preparation of the questions, the determination of knowledge accumulation as well as skills acquisition during the process must

be aimed at. Students' skills such as deciding, interpreting, deriving results, drawing cause and effect relationship must be measured, and the obtained results must be utilized in planning their future educational environments.

The questions must not only be based on knowledge and comprehension, they must aim at educating and developing children's intellect in other fields, too. Children must be taught to interpret, generate new ideas, interpret what is known, or they must be directed to embrace a new point of view, their creativity must be encouraged, and their planned goals must be achieved (Küçük, 2002, p. 129).

In this study, the measurement of students' successful development in the cognitive domain level by means of written examination questions has been focused on. The distribution of the written examination questions of the Turkish language in the cognitive domain has been focused on in order to determine students' levels of knowledge, comprehension, application, analysis, synthesis, and assessment.

Cognitive Domain. According to the classification known as the Bloom's Taxonomy; the cognitive domain is divided into six levels: knowledge, comprehension, application, analysis, synthesis, and evaluation (Bloom, 1956). Program objectives are also determined according to these levels (Demirel, 1996, p. 7). Remembering such factors as are phenomenon, concept, classification, etc. (knowledge); defining, summarizing, explaining, and interpreting the content of a communication activity (comprehension); understanding the acquired principles, techniques, etc., and utilizing them in solving new problems (application); organizing the components of a whole (analysis); forming an original message, process layout, or unity of relations (synthesis); evaluating the compatibility of a unity on the internal and external scales (evaluation) are cognitive features desired to be actualized by means of education (Özçelik, 1998, p. 98). The basic feature of Bloom's classification is that it assists the teacher in finding an answer to the question of 'What kind of a change will the student go through at the end of their education?' (Küçükahmet, 2003, p.15-16). The objectives and types of behavior located in the cognitive domain (target behaviors) aim at measuring the skills that occur in the intellect of the students (İşman & Eskicumalı, 2001, p. 207).

The taxonomy of the objectives and types of behavior from simple to complex, their progressive taxonomy as being the prerequisite of each other, and each acquired type of behavior are not entirely separated. There is a significant and close relationship between them in terms of horizontal coalescence and vertical progression. That is to say, levels of each domain are prerequisites to each other. *There can be no comprehension without knowledge; there can be no application without comprehension; there can be no analysis without application; there can be no synthesis without all of these;*

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and there can be no evaluation without synthesis. Likewise, this progression also applies to affective, psychomotor and intuitive domains (Sönmez, 2001, p. 36-37).

Affective Domain. It is the domain which investigates how students feel when they are faced with a certain condition or incident. It can be possible to find out students' cognitive skills with the help of their affective domain features. The most widely recognized classification related to this domain is Krathwohl's Taxonomy which consists of five levels: *receiving, responding, valuing, organizing, and characterizing*.

Psychomotor Domain. This domain encompasses the following levels: *perception, guided response, transforming it into a skill, adaptation, and origination*. It focuses on observing how and in which way behavior occurs, the quality of levels being prerequisites to each other, and the order followed in providing one with this behavior by also taking into account Bloom's cognitive domain and Krathwohl's psychomotor domain (Sönmez, 2001, p. 33).

Interactive Domain. In addition to Bloom's cognitive domain, Krathwohl's psychomotor domain, and Sönmez's intuitive domain, Romiszowski's (1981) interactive domain should be mentioned. According to Romiszowski, the interactive domain differs from the psychomotor domain due to the fact that interaction among people is relative and variable, that the individual feels obliged to adapt to this condition, and that the individual must learn this kind of behavior. Psychomotor domain focuses at one's use of one's own body. In the interactive domain, an individual acquires experience in interpersonal relations by learning how to supervise oneself and others, and by taking responsibility (Kucur, 1997, p. 44).

Table 1. The Taxonomic Distribution Which Shows the Horizontal Coalescence Relation and Vertical Progression Relation of the Target Behaviors Related to the Domains (developed using Sönmez, 2001, p.36).

Cognitive Domain	Affective Domain	Psychomotor Domain	Interactive Domain
Knowledge Comprehension Application Analysis Synthesis Evaluation	Receiving Responding Valuing Organizing Characterizing	Perception, Guided Response, Transforming It into a Skill, Adaptation, Origination	Forming Responsibility Awareness, Providing a Feeling of Self-Reliance, Providing a Feeling of Interpersonal Knowledge and Experience Sharing

Measurement and assessment activities must be considered in unity and progression (Özbay, 2006b, p. 166). Unity covers all language skills, whereas progression shows the distribution of the development level of

language skills. Students' status of basic language skills acquisition is measured by means of questions related to different levels of taxonomy. For instance, reading comprehension is determined with questions related to the comprehension level of the taxonomy, whereas listening skill and students' level of knowledge recall can be measured with test questions related to the knowledge level (Özbay, 2005, p. 149; 2006a, p. 26).

Aim of the Study

The aim was to determine the taxonomic distribution of the written examination questions used in measuring students' acquisition of language skills in Turkey, and to make a number of suggestions designed in accordance with the results obtained.

Main Research Problem

Is the distribution of written examination questions used in measuring students' language skills target behaviors related to students' language skills within the cognitive level balanced?

Secondary problems

1. Do distributions of the exam questions overlap with the achievements that are specified in the cognitive field program?
2. Do teachers have adequate knowledge and experience in preparing examination questions?

Material

The material used in the research consisted of written examination papers. Among the total of 205 written examination papers (1537 questions), 69 exam papers have been selected and 603 questions on these papers have been subjected to analysis. Among the given examination paper samples, 69 examination papers and 603 questions have been selected for analysis. Written examination papers were collected from 101 teachers. The teachers who participated at the research worked in 47 institutions of primary education located in the central districts of the Kayseri province. Among 101 teachers whose examination paper samples were collected, 46 were female and 55 were

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male. This made up to 45.50% of female teachers, and 54.50% of male teachers.

METHOD

The research has been conducted in 47 institutions of primary education selected from different socio-cultural districts in the Kayseri province. Written examination paper samples were collected from 101 teachers of the Turkish language chosen from the selected schools. The distribution of 10% of the questions from each class were collected by three educators, three Turkish language teachers and researchers collecting the exam papers and taking into account the qualities given in the sources. The taxonomic scale was used to determine which questions belonged to the bottom rung of the questions in the cognitive domain. Views of experts involved in the process of assessing reliability and validity of the instrument, and papers published in the field were taken into consideration. The analysis aimed at establishing which sublevel of the cognitive field the remaining part of the questions belonged to was conducted in accordance with the instrument that was developed. A total of 69 sixth, seventh, and eighth grade written examination papers was randomly selected. From these written examination papers 603 questions were analysed by coding, by means of the qualitative research approach, document examination method and the scanning technique.

Content analysis is conducted in order to comprehend the content of the documents, and to determine the content of the words and sentences in the texts (Yaman & Erdoğan, 2007, p. 242). The concepts and the sentences forming questions in the examination paper can be revealed (Yıldırım & Şimşek, 2005, p. 227). Coding is an initial and major process for the analysis gravitated towards revealing the content of the data in the qualitative analysis (Punch, 2005, p. 193).

The following stages were followed in the analysis of the written examination questions. First of all, the selected examination paper samples were sorted by assigning numbers from 1 to 69 to the papers. Then, 603 questions within the papers were dealt with one by one, and it was determined to which level of Bloom's Taxonomy they belonged. Question terms in the question base like *who, what, where, when, how, express, define, summarize, compare, plan, arrange, distinguish, show, conclude* have been taken into account in determining the question levels. The taxonomic scale was developed by using Bloom 1998; Sönmez, 1996, 2001, 2005; Yılmaz, 2002; Sever, 2004, 2007; Sever et al., 2006; Demirel et al., 2006; Purtul, 2007 etc. in determining to which sublevel of the cognitive level the questions belonged. The approach,

method and technique followed in the analysis of the questions were also implemented in the analysis of the target behaviors. The distribution list of each achievement given for the basic skills according to the grade levels (MEB, 2005, p. 134-149) was dealt with one by one and it was determined to which sublevel of Bloom's Taxonomy they belonged. While determining the gain levels, gain terms such as *knows, comprehends, uses, compares, applies, explains, defines, summarizes, realizes, plans, arranges, distinguishes, detects, concludes* have been taken as starting points.

Gain lists were included in the assessment in order to determine the corresponding level of the questions with the given target behaviors. Gain lists stated in the program in accordance with the grade levels were also examined using the approach method and technique utilized in the analysis of the questions in the written examination papers of the Turkish language.

In order to understand whether the distribution of the questions and target behaviors in Bloom's Taxonomy is balanced or not, the findings given in the Tables have also been given collectively in a separate Table and presented graphically (see Figure 1).

Statistical Analysis

Chi-square test was used to compare the qualitative variables of sex and age. T-test was used to evaluate the relation between the age average of male and female teachers. A p value of < 0.05 has been found statistically significant. The Statistical Package for the Social Sciences version 11.0 (SPSS Inc., Chicago, IL, USA) was used for the analysis.

RESULTS

Findings Related to the Documents

The examination papers collected as documents from the teachers and the acquisition lists included in the program according to the grade levels were used in the study. Out of 23 examination papers selected for each grade level, a total of 603 questions was scanned, including 196 for the sixth grade, 202 for the seventh grade and 205 for the eighth grade. Similarly, in each of the three grade levels a total of 1015 items of target behaviors was scanned including 275 for the sixth grade, 348 for the seventh grade and 392 for the eighth grade. The findings based on the results of the scanning and related to the distribution

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of the questions and target knowledge behaviors within the cognitive domain sublevels are given in Table 5.

Table 2a. Distribution of Sixth, Seventh, and Eighth Grade Examination Questions According to the Cognitive Domain Sublevels

Cognitive Domain Sublevels	Sixth Grade		Seventh Grade		Eighth Grade	
	f	*%*	*F*	*%*	*f*	*%*
Knowledge	25	12.76	31	15.35	36	17.56
Comprehension	107	54.59	96	47.52	108	52.68
Application	51	26.02	60	29.70	50	24.39
Analysis	3	1.53	4	1.98	1	0.49
Synthesis	6	3.06	4	1.98	2	0.98
Evaluation	4	2.04	7	3.47	8	3.90
Total	196	100.00	202	100.00	205	100.00

Table 2a shows the grade levels of 603 questions included in the written examinations which teachers of the Turkish language have given to sixth, seventh and eighth grade students and the distribution of these questions according to the cognitive domain levels.

According to the results, 12.76% of the questions given by the sixth grade teachers belong to the knowledge level, 54.59% to comprehension, 26.02% to application, 1.53% to analysis, 3.06% to synthesis and 2.04% to evaluation level questions.

Further, 15.35% of the questions given by the seventh grade Turkish language teachers consists of questions related to the knowledge level, 47.52% consists of questions related to the comprehension level, 29.70% consists of questions related to the application level, 1.98% consists of questions related to the analysis level, 1.98% consists of questions related to the synthesis level and 3.47% consists of questions related to the evaluation level.

Finally, 17.56% of the questions of eighth grade Turkish language teachers consists of questions related to the knowledge level, 52.68% consists of questions related to the comprehension level, 24.39% consists of questions related to the application level, 0.49% consists of questions related to the analysis level, 0.98% consists of questions related to the synthesis level and 3.90% consists of questions related to the evaluation level.

Table 2b. The Distribution of Sixth, Seventh, and Eighth Grade Target Knowledge Behaviors According to the Cognitive Domain Sublevels

Cognitive Domain Sublevels	Sixth Grade		Seventh Grade		Eighth Grade	
	f	*%*	*f*	*%*	*f*	*%*
Knowledge	46	16.73	41	11.78	49	12.50
Comprehension	21	7.64	30	8.62	34	8.67
Application	98	35.64	113	32.47	119	30.36
Analysis	27	9.81	38	10.92	41	10.46
Synthesis	33	12.00	52	14.94	56	14.29
Evaluation	50	18.18	74	21.27	93	23.72
Total	275	100.00	348	100.00	392	100.00

Table 2b shows the grade levels of target knowledge behaviors included in the program, and the distribution of these types according to the cognitive domain sublevels.

The results show that 16.73% of sixth grade reached target behaviors belongs to the knowledge level, 7.64% belongs to the comprehension level, 35.64% to the application level, 9.81% to the analysis level, 12% to the synthesis level, and 18.18% to the evaluation level.

Further, 11.78% of seventh grade reached target behaviors belongs to the knowledge level, 8.62% to the comprehension level, 32.47% to the application level, 10.92% to the analysis level, 14.94% to the synthesis level, and 21.27% to the evaluation level.

Finally, 12.50% of eighth grade reached target behaviors belongs to the knowledge level, 8.67% to the comprehension level, 30.36% to the application level, 10.46% to the analysis level, 14.29% to the synthesis level, and 23.72% belongs to the evaluation level.

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Table 2c. The Distribution of Sixth, Seventh, and Eighth Grade Total Questions and Target Behaviors According to the Cognitive Domain Sublevels

Cognitive Domain Sublevels	The Distribution of Questions		The Distribution of Acquisitions	
	f	%	*f*	%
Knowledge	92	15.26	136	13.40
Comprehension	311	51.57	85	8.37
Application	161	26.70	330	32.51
Analysis	8	1.33	106	10.44
Synthesis	12	1.99	141	13.90
Evaluation	19	3.15	217	21.38
Total	603	100.00	1015	100.00

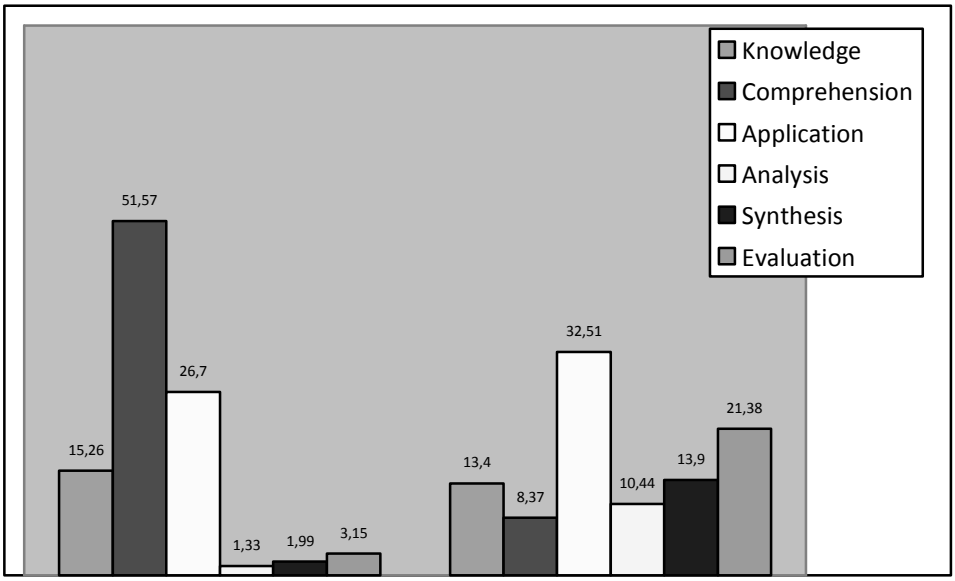

Figure 1. The Distribution Status of Question and Acquisition Levels in All Grades

It can be observed that there is no balanced distribution of questions and items of target knowledge behaviors over the cognitive domain levels within the scale of all grades. Questions generally focus on grammar (knowledge); understanding and interpreting the given text, forming a relation between the incidents (comprehension); understanding, explaining, using the grammar rules taught and (application) levels which test such student skills. On the other hand, there are not enough questions in the analysis, synthesis and

evaluation levels. The questions do not meet the target behaviors within the same level. The difference in the distribution of the questions and items of target behaviors within comprehension, analysis, synthesis and evaluation levels is remarkable.

According to the studies conducted on the subtext questions found in the primary education Turkish language text books, it can be observed that questions at all grade levels most commonly measure the recalling (knowledge) behaviors, less commonly the comprehension behaviors and least commonly the application behaviors. Moreover, the analysis and post-analysis levels questions have not been asked (Kutlu, 1999, p. 14). The result of the present study conducted on the written examination questions show that this situation has not changed much. Poyrazoğlu (1999, p. 246) states that teachers perform measurement and assessment activities in accordance with the traditions and 'principles', that questions used belong to the 'knowing' (recalling) level and do not include most of the material taught, that these questions do not have the required quality to measure the expressions and skills of the teachers, and that the validity and reliability of the examinations are controversial.

The aim of a modern and scientific education is to teach the individual the ways of knowledge acquisition, to develop the skill of reasonable thinking in the individual, to improve the skill of solving the problems encountered and of adapting to various situations faced in daily life rather than to equip the individual with knowledge (Küçük, 2002, p. 130).

CONCLUSIONS

The distribution in the cognitive domain sublevels of the written examination questions used in determining the target behaviors related to the language skills of the students is not balanced. It has been shown that the questions focus on the comprehension level and that they remain inadequate in the analysis, synthesis and evaluation levels (see Table 2a).

The distribution of the questions within the cognitive domain sublevels corresponds to the distribution of the same target behaviors in the program. The examination questions do not meet the target behaviors. In other words, it can be said that the target behaviors achieved by the program do not overlap with the exam questions (see Table 2c).

The distribution of the questions handed out to the sixth, seventh and eighth graders is not balanced. It has been observed that teachers were not capable of preparing the exam questions used to measure students' levels of development.

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Suggestions

In determining student success, it is necessary to measure the knowledge of the student, to put the acquired knowledge into practice and most importantly to reveal the usability extent of this knowledge. Thus, while determining student success, teachers must attach equal importance to all cognitive domain sublevels, measure and evaluate students' development in different levels by preparing questions which, apart from the knowledge and comprehension levels, also test analysis, synthesis and evaluation levels.

While organizing the learning – teaching process and preparing questions to determine student success within the process, teachers must take into account the target behaviors provided in the program.

The most important cause of the inability to organize the learning – teaching process expediently as well as the disability of students to achieve the target behaviors targeted are the pedagogical deficiencies of the teachers on the issues of measurement and evaluation. In-service courses must be organized to help teachers perform their measurement and evaluation work in a way that is appropriate for the established goal and to enable them to acquire pedagogical efficiency in this field which requires particular specialization.

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VREDNOVANJE PITANJA PISMENOGA ISPITA ZNANJA IZ TURSKOGA JEZIKA PREMA BLOOMOVOJ TAKSONOMIJI

SAŽETAK

Problemsko pitanje: Namjera ovog istraživanja bila je ispitati ispunjavaju li pitanja na pismenom ispitu u osnovnoškolskom obrazovanju svoju ulogu u ispitivanju govornih vještina u učenika ili ne, je li distribucija pitanja na pismenom ispitu na podrazinama kognitivne domene balansirana ili ne i jesu li pitanja na pismenom ispitu usklađena s predviđenim razinama usvojenosti znanja određenih programom ili ne. Svrha: Svrha istraživanja bila je izraditi niz pridjeloga utemeljenih na rezultatima istraživanja dobivenim uz pomoć taksonomske distribucije u kognitivnoj domeni pitanja na pismenim ispitima te upotrijebljenim u mjerenju razine usvojenosti govornih vještina u turskih učenika, određivanja razine pitanja upotrijebljenih u svrhu postizanja programom određenih razina usvojenosti znanja i određivanja kompetencija mjerenja i ocjenjivanja u učitelja. Metoda: Istraživanje je provedeno u 47 odabranih institucija primarnoga obrazovanja iz različitih društveno-kulturalnih oblasti Kayseri provincije. Prikupljeni su pismeni ispiti 101 učitelja turskoga jezika iz odabranih škola. Ukupno 69 pismenih ispita nasumično je izabrano iz ukupnog uzorka pismenih ispita šestih, sedmih i osmih razreda. Za analizu su odabrana 603 pitanja. Ta su pitanja analizirana uz pomoć kvalitativnog istraživačkog pristupa, metode proučavanja dokumenta i tehnike skeniranja. Rezultati: Distribucija pitanja iz pismenih ispita upotrijebljenih u svrhu određivanja usvojenosti govornih vještina u učenika te podstupnjeva kognitivne domene nije uravnotežena.

***Ključne riječi**: analiza, kognitivna domena, mjerenje i ocjenjivanje, taksonomska distribucija pitanja*

UVOD

Proces usvajanja jezika ovisi o djetetovom kognitivnom, afektivnom i psihomotornom razvoju. Stoga se djetetov jezični razvoj u razdoblju primarnog obrazovanja mora definirati kroz istraživanje njegova kognitivnog aspekta kako bi se osiguralo bolje razumijevanje razvojnoga procesa (Yapıcı, 2004, str. 38). Stupnjevi spremnosti učenika moraju biti pažljivo određeni kako bi se učenike

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opskrbilo vještinama koje su u skladu s određenim stupnjem. Određivanje kognitivne kompetencije učenika značajno je za provođenje kvalitetnih budućih istraživanja kao i za postizanje postavljenih ciljeva. Prema tome, pitanja na pismenom ispitu koja se koriste u određivanju učeničkoga uspjeha moraju biti pripremljena na primjeren način kako bi učenicima pomogla steći osnovne vještine i vještine višega stupnja kao što su razumijevljanje, interpretacija, izvođenje odnosa uzroka i posljedice, donošenje odluka, rasvljetljavanje, organiziranje, propitivanje, rješavanje problema. Ove vještine moraju pridonijeti kognitivnom razvoju učenika, kao i njihovom afektivnom i psihomotoričkom razvoju.

U širem smislu, odgajati i obrazovati znači uvesti promjene u ljudsko ponašanje (Baykul, 1992, str. 85). Osnovni cilj mjerenja učeničkog postignuća u usvajanju znanja i promjena koje ono izaziva u ponašanju jest utvrđivanje kompetencija učenika i njihova priprema za sljedeći odgojno-obrazovni stupanj umanjivanjem njihovih trenutnih nedostataka. U procesu mjerenja i ocjenjivanja važno je poznavati odgojno-obrazovne ciljeve. Zapravo, ocjenjivanje je alat koji se koristi u razumijevanju razmjera postignuća određenih ciljeva i uočavanja ciljeva koji nisu postignuti u primjerenim razmjerima. Prema tome, preduvjet za elemente pismenoga ispita (pitanja) za ciljeve različitih stupnjeva jest klasifikacija ciljeva i učiteljevo poznavanje njihovih sadržaja (Yılmaz, 2002, str. 313-314). Učitelji moraju odrediti razinu učeničkog uspjeha pomoću ocjene procesa i rezultata u skladu s klasificiranim ciljevima. Pitanja na pismenom ispitu najvažniji su pribor koji se koristi u ocjenjivanju rezultata. Pri pripremi pitanja u obzir se mora uzeti klasifikacija ciljeva, pitanja moraju pokriti gradivo danih predmeta, a ispiti moraju imati karakteristiku sadržajne valjanosti. U pripremi pitanja mora se odrediti akumulacija znanja kao i usvajanje vještina tijekom tog procesa. Moraju se izmjeriti vještine kao što su odlučivanje, interpretacija, izvođenje rezultata, određivanje odnosa uzorka i posljedice, a postignuti se rezultati moraju upotrijebiti u planiranju učeničke buduće odgojno-obrazovne okoline.

Pitanja se ne smiju temeljiti samo na znanju i razumijevanju, njihov cilj mora biti odgoj i obrazovanje te razvoj dječjega intelekta i u ostalim poljima. Djecu se mora učiti interpretirati, generirati nove ideje, interpretirati ono što je poznato, ili se moraju usmjeriti na prihvaćanje novih viđenja. Njihova kreativnost mora se poticati, a njihove planirane ciljeve treba postići (Küçük, 2002, str. 129).

Ovaj rad bavi se mjerenjem uspjeha učeničkog razvoja u kognitivnoj domeni uz pomoć pitanja iz pismenih ispita. Proučavana je distribucija pitanja na pismenim ispitima iz turskoga jezika u kognitivnoj domeni kako bi se odredilo učeničko znanje, razumijevanje, primjena, analiza, sinteza i ocjenjivanje.

Kognitivna domena. Prema klasifikaciji poznatoj kao Bloomova taksonomija, kognitivna je domena podijeljena u šest stupnjeva: stupanj znanja, razumijevanja, primjene, analize, sinteze i ocjenjivanja (Bloom, 1956). Ciljevi programa također se određuju prema tim stupnjevima (Demirel, 1996, str. 7). Pamćenje faktora kao što su fenomen, koncept, klasifikacija itd. (znanje); definiranje, sažimanje, objašnjavanje i interpretiranje sadržaja komunikacijske aktivnosti (razumijevanje); razumijevanje stečenih principa, tehnika itd. te njihova uporaba u rješavanju novih problema (primjena); organizacija komponenti cjeline (analiza); uobličavanje originalne poruke, plan procesa ili jedinstvo odnosa (sinteza); ocjena kompatibilnosti jedinstva unutarnjih i vanjskih skala (ocjena) kognitivne su karakteristike koje se nastoji ostvariti odgojem i obrazovanjem (Özçelik, 1998, str. 98). Osnovna karakteristika Bloomove klasifikacije jest ta da pomaže učitelju u pronalaženju odgovora na pitanje „Kroz kakvu će vrstu promjene učenik proći na kraju svog odgojno obrazovnog procesa?" (Küçükahmet, 2003, str.15-16). Ciljevi i vrste ponašanja smješteni u kognitivnoj domeni (razine usvajanja) imaju za cilj mjerenje vještina koje se odigravaju u učenikovom intelektu (İşman & Eskicumalı, 2001, str. 207).

Taksonomija ciljeva i tipova ponašanja, počevši od jednostavnih prema kompleksnima, njihova progresivna taksonomija kao preduvjet jedan drugome te svaki usvojeni tip ponašanja nisu u potpunosti zasebni. Među njima postoji značajan i blizak odnos u smislu horizontalnog stapanja i vertikalnog napredovanja. Drugim riječima, stupnjevi svake domene preduvjet su jedna drugoj. *Nema razumijevanja bez znanja, nema primjene bez razumijevanja, nema analize bez primjene, nema sinteze bez svih prethodno navedenih domena i nema evaluacije bez sinteze. Ovo se napredovanje također odnosi i na afektivnu, psihomotoričku i intuitivnu domenu* (Sönmez, 2001, str. 36-37).

Afektivna domena. To je domena u kojoj se nastoji ustanoviti kako se učenici osjećaju kad su suočeni s određenim stanjem ili događajem. Moguće je odrediti učeničke kognitivne vještine uz pomoć karakteristika afektivne domene. Krathwohlova taksonomija, koja ima pet stupnjeva, najpriznatija je klasifikacija koja se bavi ovom domenom.

Psihomotorička domena. Ova domena obuhvaća sljedeće stupnjeve: *percepciju, vođeni odgovor*, *pretvaranje u vještinu, prilagodbu i nastajanje*. Promatra se način na koji se ponašanje odvija, međusobno uvjetovanje navedenih stupnjeva te redoslijed poučavanja osobe određenom ponašanju, uzimajući u obzir Bloomovu kognitivnu i Krathwohlovu psihomotoričku domenu (Sönmez, 2001, str. 33).

Interaktivna domena. Uz Bloomovu kognitivnu domenu, Krathwohlovu psihomotoričku domenu i Sönmezovu intuitivnu domenu potrebno je spomenuti i interaktivnu domenu Romiszowskog (1981). Prema Romiszowskom, interaktivna se domena razlikuje od psihomotoričke domene

zbog toga što je međuljudska interakcja relativna varijabla, zbog toga što se pojedinac osjeća obveznim prilagoditi tom stanju te mora naučiti takvo ponašanje. Psihomotorička domena usmjerena je na korištenje pojedinca vlastitim tijelom. U interaktivnoj domeni pojedinac stječe iskustvo u međuljudskim odnosima učeći nadzirati sebe i ostale te preuzimajući odgovornost (Kucur, 1997, str. 44).

Tablica 1.

Aktivnosti mjerenja i vrednovanja moraju se proučavati u smislu jedinstva i napredovanja (Özbay, 2006b, str. 166). Pojmom jedinstva obuhvaćene su sve jezične vještine, dok se pojmom napredovanja prikazuje distribucija stupnja razvoja jezičnih vještina. Stanje usvojenosti osnovnih jezičnih vještina u učenika mjeri se pitanjima koja se odnose na različite stupnjeve taksonomije. Primjerice, razumijevanje pisanog teksta određeno je pitanjima koja se odnose na stupanj razumijevanja taksonomije, dok se vještina slušanja i stupanj prisjećanja u učenika mogu mjeriti testnim pitanjima koja se odnose na stupanj znanja (Özbay, 2005, str. 149; 2006a, str. 26).

Ciljevi istraživanja

Cilj je istraživanja odrediti taksonomsku distribuciju pitanja na pismenom ispitu koja se upotrebljavaju u mjerenju usvojenosti jezičnih vještina u turskih učenika te izraditi niz prijedloga u skladu s dobivenim rezultatima.

Glavni problem istraživanja

Je li uravnotežena distribucija pitanja na pismenom ispitu upotrijebljanih za mjerenje usvojenosti učeničkih jezičnih vještina?

Sporedni problemi

1.Preklapaju li se distribucije ispitnih pitanja s postignućima određenim programom kognitivnoga polja?

2.Imaju li učitelji adekvatno znanje i iskustvo u pripremi ispitnih pitanja?

Materijal

Materijal proučavan u istraživanju sastojao se od pismenih ispita. Među 205 ispita (1537 pitanja) odabrano je 69 te su analizirana 603 pitanja. Među navedenim uzorcima ispita, 69 ispita i 603 pitanja izabrana su za uzorak istraživanja. Pismeni ispiti prikupljeni su od 101 učitelja. Učitelji koji su sudjelovali u istraživanju radili su u 47 institucija primarnog obrazovanja smještenih u centralnom okrugu Kayseri provincije. Od ukupno 101 učitelja čiji su ispiti prikupljeni sudjelovalo je 46 žena i 55 muškaraca. Od ukupnog broja učitelja bilo je 45,50% žena i 54,50% muškaraca.

METODA

Istraživanje je provedeno u 47 institucija primarnog obrazovanja odabranih iz različitih društveno-kulturalnih oblasti Kayseri provincije. Uzorci pismenih ispita prikupljeni su od 101 učitelja turskoga jezika odabranih iz biranih škola. Distribuciju od 10% pitanja iz svakog razreda prikupila su tri odgojno-obrazovna djelatnika, tri učitelja turskoga jezika i istraživača koji su skupljali ispite i razmatrali kvalitete navedene u danim izvorima. Taksonomska skala upotrijebljena je u određivanju tipa pitanja koja su pripadala nižem stupnju pitanja u kognitivnoj domeni. Razmotreni su stavovi stručnjaka uključenih u proces procjene pouzdanosti i valjanosti instrumenta i pisani radovi iz toga područja. U skladu s ovako razvijenim instrumentom provedena je analiza kojoj je cilj bio utvrditi kojem podstupnju kognitivnoga polja pripada preostali dio pitanja. Slučajnim odabirom je iz uzoraka pismenih ispita šestih, sedmih i osmih razreda izdvojeno 69 ispita iz kojih su analizirana 603 pitanja. U analizi je upotrijebljena metoda kvalitativnog istraživačkog pristupa, metoda proučavanja dokumenta i tehnika skeniranja.

Analiza sadržaja provedena je s ciljem razumijevanja sadržaja dokumenata i utvrđivanja sadržaja riječi i rečenica u tekstovima (Yaman & Erdoğan, 2007, str. 242). Koncepti i rečenice koje tvore ispitna pitanja smiju se obznaniti (Yıldırım & Şimşek, 2005, str. 227). Kodiranje je početni i glavni proces analize u kojoj se teži k obznanjivanju sadržaja podataka kvalitativne analize (Punch, 2005, str. 193).

U analizi pitanja pismenih ispita pratilo se sljedeće korake. Prije svega, uzorci utvrđenih ispitnih pitanja razvrstani su tako što su ispitima pridruženi brojevi od 1 do 69. Potom je pojedinačno obrađeno svako od 603 pitanja te je utvrđeno kojem stupnju Bloomove taksonomije ona pripadaju. Termini pitanja u temelju pitanja kao što su *tko, što, gdje, kad, kako, izraziti, definirati, sažeti, usporediti, planirati, svrstati, istaknuti, pokazati, zaključiti* uzeti su u obzir pri

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određivanju stupnja kojem pripadaju pitanja. U svrhu određivanja podstupnja unutar kognitivnog stupnja kojem su pripadala pitanja razvijena je taksonomska skala na temelju radova sljedećih autora: Bloom 1998; Sönmez, 1996, 2001, 2005; Yılmaz, 2002; Sever, 2004, 2007; Sever i dr., 2006; Demirel i dr., 2006; Purtul, 2007 itd. Pristup, metoda i tehnika kojima se služilo u analizi pitanja upotrijebljene su i u analizi usvojenih znanja s obzirom na stupnjeve taksonomije. Pojedinačno su obrađene distribucijske liste svakog danog postignuća u temeljnim vještinama u skladu s razinama razreda (MEB, 2005, str. 134-149) te je utvrđeno kojem je podstupnju Bloomove taksonomije koje postignuće pripalo. Kao početne točke pri utvrđivanju razina postignuća uzeti su termini koji opisuju postignuća kao što su: *zna, razumije, koristi, uspoređuje, primjenjuje, objašnjava, definira, sažima, ostvaruje, planira, svrstava, ističe, otkriva, zaključuje.*

Popisi postignuća također su uvršteni u vrednovanje kako bi se odredio odgovarajući stupanj kojem pripadaju pitanja u odnosu na dane razine usvojenih znanja. Popisi postignuća dani u programu, a koji su u skladu s razinama razreda, također su analizirani pristupom, metodom i tehnikom upotrijebljenim u analizi pitanja pismenih ispita turskoga jezika.

Kako bi se otkrilo je li distribucija pitanja i razina usvojenih znanja uravnotežena ili ne, rezultati istraživanja dani u tablicama prikazani su i zajedno u posebnoj tablici te grafičkom prikazu (Slika 1).

Statistička analiza

Hi-kvadrat testom uspoređene su kvalitativne varijable spola i dobi. T-testom su određeni odnosi između prosječne dobi muških i ženskih učitelja. Rezultati su pokazali statistički značajnu razliku ($p < 0,05$). Pri analizi je upotrijebljen Statistički program za društvene znanosti, inačica 11.0 (SPSS Inc., Chicago, IL, USA).

REZULTATI

Spoznaje vezane uz dokumente

U istraživanju su upotrijebeljni ispiti prikupljeni od učitelja te liste obrazovnih postignuća koje su u program uključene u skladu s razinom razreda uključenih u istraživanje. Iz 23 ispita, izabraniih za svaku razrednu razinu, ukupno su skenirana 603 pitanja, od toga 196 za šesti razred, 202 za sedmi i 205 za osmi razred. Za svaku od tri razredne razine ukupno je skenirano 1015

usvojenih znanja, uključujući 275 za šesti, 348 za sedmi i 392 za osmi razred. U Tablici 5 prikazani su zaključci izvedeni na temelju rezultata skeniranja, a koji se odnose na distribuciju pitanja i usvojenih znanja unutar podstupnjeva kognitivne domene.

Tablica 2a.

U Tablici 2a prikazane su razredne razine za 603 ispitna pitanja koja su učitelji turskoga jezika podijelili učenicima šestih, sedmih i osmih razreda te distribuciju tih pitanja prema podstupnjevima kognitivne domene.

Rezultati su pokazali da 12,76% pitanja koja su učitelji turskog jezika podijelili šestim razredima pripada stupnju znanja, 54,59% razumijevanju, 26,02% primjeni, 1,53% analizi, 3,06% sintezi, a 2,04 evaluacijskom stupnju.

Od svih pitanja koja su učitelji turskoga jezika podijelili sedmim razredima 15,35% čine pitanja koja se odnose na stupanj znanja, 47,52% su pitanja koja se odnose na stupanj razumijevljanja, 29,70% se odnosi na stupanj primjene, 1,98% na stupanj analize, 1,98% na stupanj sinteze, a 3,47% pitanja odnose se na stupanj evaluacije.

Konačno, 17,56% pitanja podijeljenih osmim razredima sastoji se od pitanja koja se odnose na stupanj znanja, 52,68% se sastoji od pitanja koja se odnose na stupanj razumijevanja, 24,39% na stupanj primjene, 0,49% pitanja odnosi se na stupanj analize, 0,98% čine pitanja koja se odnose na stupanj sinteze, a 3,90% pitanja odnosi se na stupanj evaluacije.

Tablica 2b.

U Tablici 2b prikazane su razine razreda i usvojenosti znanja uključenih u program te distribucija tih znanja prema podstupnjevima kognitivnih domena.

Rezultati su pokazali da u osmim razredima 16,73% usvojenih znanja s obzirom na stupnjeve taksonomije pripada stupnju znanja, 7,65% stupnju razumijevanja, 35,64% stupnju primjene, 9,81% stupnju analize, 12% stupnju sinteze, a 18,18% stupnju evaluacije.

U sedmim razredima 11,78% usvojenih znanja s obzirom na stupnjeve taksonomije pripada stupnju znanja, 8,62% stupnju razumijevanja, 32,47% stupnju primjene, 10,92% stupnju analize, 14,94% stupnju sinteze, a 21,27% stupnju evaluacije.

Konačno, u osmim razredima 12,50% usvojenih znanja s obzirom na stupnjeve taksonomije pripada stupnju znanja, 8,67% stupnju razumijevanja, 30,36% stupnju primjene, 10,46% stupnju analize 14,29% stupnju sinteze i 23,72% stupnju evaluacije.

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Tablica 2c.

Grafički prikaz 1

Na skali svih razreda vidi se da nema uravnotežene distribucije pitanja i usvojenih znanja na stupnjevima kognitivne domene. Pitanja su uglavnom usredotočena na testiranje gramatike (znanja); razumijevanja i interpretacije zadanoga teksta, formiranja odnosa među događajima (razumijevanje); razumijevanja, objašnjavanja, uporabe prethodno naučenih gramatičkih pravila i stupnjeva (primjene) kojima se testiraju takve vještine u učenika. S druge strane, nema dovoljno pitanja koja bi pokrila stupnjeve analize, sinteze i evaluacije. Pitanja nisu u potpunosti usklađena s usvojenošću zadanom unutar jednog i istog stupnja. Razlika između distribucije pitanja i usvojenih znanja unutar stupnjeva razumijevanja, sinteze i evaluacije je zamjetna.

Prema istraživanjima provedenim na temu implicitnih pitanja koja je uvrštena u osnovnoškolske udžbenike turskoga jezika, pitanja na svim razrednim razinama najčešće mjere ponašanje u smislu dosjećanja (znanje), rjeđe mjere razumijevanje, a ponajmanje primjenu znanja. Štoviše, pitanja na razinama analize i naknadne analize ne postavljaju se (Kutlu, 1999, str. 14). Rezultati ovoga istraživanja provedenog s pitanjima iz pismenih ispita pokazali su da se prethodno opisana situacija nije puno promijenila. Poyrazoğlu (1999, str. 246) tvrdi da učitelji provode aktivnosti mjerenja i ocjenjivanja u skladu s tradicijom i „principima“, da pitanja kojima se koriste pripadaju stupnju „znanja“ (dosjećanja) i ne uključuju većinu materije koja se poučava u školi, da ta pitanja nisu primjerena za mjerenje izražavanja i vještina učitelja te da je vrijednost i pouzdanost ispita upitna.

Cilj modernog odgoja i obrazovanja, utemeljenog na znanstvenom principu, nije samo opskrbljivanje učenika raznim znanjima već poučavanje pojedinca načinima usvajanja znanja, razvijanju vještine razumnog mišljenja u pojedinca, unaprjeđenju vještine rješavanja problema te prilagođavanju različitim situacijama s kojima se pojedinac svakodnevno suočava (Küçük, 2002, str. 130).

ZAKLJUČCI

Distribucija u podstupnjevima kognitivne domene pitanja pismenih ispita upotrijebljenih u određivanju razina usvojenosti znanja koje se odnose na jezične vještine u učenika nije uravnotežena. U radu je pokazano da su pitanja usmjerena na stupanj razumijevanja te da su neadekvatna za stupnjeve analize, sinteze i evaluacije (v. Tablicu 2a).

Distribucija pitanja na podstupnjevima kognitivne domene odgovara distribuciji jednake razine usvojenosti znanja u programu. Ispitna pitanja ne odgovaraju postavljenim razinama usvojenosti znanja. Drugim riječima, razine usvojenosti znanja postignute programom ne preklapaju se s ispitnim pitanjima (v. Tablicu 2c).

Distribucija pitanja podijeljenih šestim, sedmim i osmim razredima nije uravnotežena. Primjetno je da učitelji nisu bili sposobni pripremiti primjerena ispitna pitanja kojima bi se izmjerile razine razvoja u učenika.

Prijedlozi

U određivanju učeničkoga uspjeha nužno je izmjeriti znanje učenika, stečeno znanje upotrijebiti u praksi i, što je najvažnije, otkriti razinu korisnosti toga znanja. Stoga, pri određivanju učeničkoga uspjeha učitelji moraju dati jednaku važnost svim podstupnjevima kognitivne domene, mjeriti i vrednovati učenički razvoj u okviru raznih stupnjeva taksonomije pripremajući pitanja koja, uz stupnjeve znanja i razumijevanja, testiraju i stupnjeve analize, sinteze i evaluacije.

Pri organizaciji procesa učenja i poučavanja te pripreme pitanja za određivanje učeničkoga uspjeha tijekom procesa učitelji moraju uzeti u obzir razine usvojenosti znanja zadane programom.

Najvažniji uzrok nemogućnosti svrsishodne organizacije procesa učenja i poučavanja te nemogućnosti učenika za postizanje ciljne razine usvojenosti predstavljaju pedagoški nedostatci učitelja u pitanju mjerenja i vrednovanja.

Potrebno je organizirati program obrazovanja učitelja uz rad kako bi ih se obučilo za provođenje mjerenja i vrednovanja na način primjeren utvrđenim ciljevima te kako bi im se omogućilo steći pedagošku efikasnost u ovome polju koje zahtjeva osobitu specijalizaciju.