

Natela Imedadze

Ilia State University

Challenges Related to Psychological Criteria of Assessing Bilingualism (In Primary Grades)

Abstract

The article explores the issue of assessing acquisition of the second language in the bilingual context. Different approaches and perspectives of this issue are overviewed. In addition to this, the article presents challenges of the assessment by discrete tests, particularly in primary grades. Finally, the article proposes incorporation of psychological criteria in the assessment of the language acquisition, such as spontaneity of verbal expressions, productivity and alignment with the communication strategy. The article also shows the importance of theoretical background for the assessment of the effectiveness of the second language instruction.

Keywords: Assessing bilingualism, discrete tests, psychological criteria.

Introduction

Effectiveness of each new method can be judged by comparing initial and post-intervention knowledge and skills. In the context of the second language assessment, initial and achieved levels of the language level are compared. Subjective assessments of the language acquisition level (such as „knows language fluently“) as well as widely accepted A,B,C levels may not be sufficiently effective for assessing verbal activities of the beginner students who make first steps in acquiring foreign language. Existing linguistic criteria as well as assessment testing system aligned with them with their advantages and shortcomings need in-depth analysis. In this article I will make an attempt to show the necessity of separating psychological criteria. With the consideration

of these criteria, results of several experimental studies will be also shown.

1.1. It is quite challenging to assess early or emergency bilingualism, particularly in the context of bilingual education. First of all this requires substantial theoretical justification and baseline study. I fully agree with Jim Cummins (2003), who believes in the direct link between research and politics (in the context of bilingual education): Researchers should identify the most effective programs among the existing ones and policy makers should ensure implementation of this program. At the same time, there are specific requirements of „the methodologically appropriate research“. However, according to Jim Cummins, they are

rarely followed. For example, among 224 publications reviewed by Cummins, only 15 met the above-mentioned requirements. I think assessment of the effectiveness of instruction should be based on solid theory. Along with purely linguistic parameters, this theory should also consider age-specific factors. According to Jean Piaget, 6-8 year old child can fulfil certain specific operations which belong to the so called critical period of the language acquisition (Eric Lenneberg, Heppord, etc.).

1.2. Standard of Georgian as a Second Language emphasizes importance of developing listening and speaking skills at the primary level (Doborjginidze, N., et.al. 2011). The standard and program is composed of so called achievement indicators by each grade in four areas: listening, reading, writing and speaking. The standard of the first grade includes quite challenging indicators, such as: „A student uses skills necessary for speaking“ (6); „A student uses speaking strategies“ (9). The program does not include any instruments for measuring achievement of these tasks, neither the strategy is defined. However, the program explains that usage of nonverbal actions, as well as request for help in the native language belong to the speaking strategies. The same definition is given for the second grade standards. Grammar is presented as a separate section. Vocabulary is not separated. I believe that acquisition of a native language can serve as a model of learning second language in this age. Acquisition of the native language is deeply studied – qualitative and quantitative aspects of the vocabulary (D. Uznadzem 2003; A.

Avalishvili 1965), as well as patterns of grammar acquisition (N. Imedadze, 1992).

1.3. Among all standardized tests famous Peabody test is the most appropriate for the primary grades. Peabody test is a vocabulary assessment tool. Procedures may remain the same, however, the content should be adapted to the Georgian context. It is interesting to look at the quantitative indicators of the native language vocabulary. Results significantly vary child by child, however, on average, a child enriches his/her vocabulary with 300 words in the first year of speech development. Speech development is a certain sequence which is influenced by age-specific requirements (the child first learns those grammar constructions needed for satisfying the basic needs, such as manipulating with objects). On the other hand, sequence of speech development is influenced by the perception of grammatical forms (D. Slobin, 1974). Georgian scientists have studied the above-mentioned sequence in the speech development of Georgian children. I think information about this sequence can also be used for teaching Georgian as a second language (A. Avalishvili, 1961; N. Imedadze, 1992).

We have conducted 6-year experimental study on the development of listening and speaking skills (English and Russian languages – A. Alkhazishvili, N. Imedadze, N. Chkhikvishvili, N. Prangishvili, 1982). Based on these findings we can propose recommendations for assessing listening and speaking skills during the acquisition of the second language by 6-7 year old

students. The first and second grade students were taught the second language (Russian and English) under the auspices of D. Uznadze Psychology Institute (leader – Professor Sh. Chkhartishvili). The main principals of the theoretical framework were developed by A. Alkhazishvili. I personally participated in the development of the bilingual model and the implementation of the methodology together with the group of methodologists and teachers. Principals of the instruction as well as the process of teaching and learning is described in two volume work published by D. Uznadze Institute of Psychology (ed. A. Alkhazishvili, 1977-1982).

The model of teaching second language to 6-7 year old students was based on the above-mentioned theoretical principal. It was implemented in the extended day programs of Georgian schools during so-called non-learning behaviors (during walking, having lunch, playing, drawing and singing) with the latent teaching format (By Alkhazashvili). Verbal expressions of both teachers and students were aligned with the above-mentioned behavior. The main principal of the bilingual model used was “One person – one language”, i.e. English or Russian teachers always used respective foreign language with the students. Gradually all speech actions needed for the respective behaviors were in place with all their linguistic components (A. Alkhazishvili, 1982; N. Imedadze, 1984).

Six-year experience of the experimental study gave us the opportunity to identify methodological tools, scenarios of introducing instructional materials, as well as forms. In other words, from the

psychological point of view, this process was well arranged. At the same time, we came across with a challenge to ensure objective assessment of the achieved results in the alignment of the goals of the study.

At this stage, the goal of the study was to develop only basic listening and speaking skills. As it was mentioned above, Peabody test was the only standardized vocabulary test. However, it was not adapted to the Georgian context. Moreover, even the standard of Georgian as a second language does not include mandatory vocabulary expectations for each grade. I think this is reasonable. Number and types of lexical units depend on the forms of those behaviors that are included in the teaching and learning process. In our experimental study, these behaviors were having breakfast, walking, exercising, singing, drawing and verbal plays. Vocabulary and basic grammatical structures were assessed by observing verbal realization of these behavioral forms. At the end of the second year, students were able to implement all the above-mentioned behavioral forms in the second language. Researchers often recommend such situational approach to the selection of the language materials. According to Colin Baker and Sylvia Johns: “Questions about how many sub-skills exist in a bilingual’s proficiency will relate to the purpose and usage of the language.” (Encyclopedia on Bilingual Education published in 1998).

Thus, we assessed proficiency in the second language by using structured observation method. This enabled us to

identify several psycho-linguistic criteria of two levels of the language acquisition.

2.1. Existing situation in Georgia, on the one hand, requires providing opportunities for acquiring English as a second language from early ages. On the other hand, there are needs for facilitating acquisition of the Georgian language by ethnic minorities residing in Georgia. Both cases echoes the issue of bilingual education and assessment of early bilingualism and achieved results.

2.2. Lambert and Tucker in 1972 conducted research on bilingual education of 6-7 year old children. This is one of the most in-depth researches carried out in Canada on teaching and learning of the second language. We should emphasize the essential difference – As part of Lambert experiment children acquired the second language in primary grades by learning all subjects in the second language. English kids studied French as a second language in French schools. Monograph by Lambert and Tucker is a history of a Canadian project the aim of which was to develop second language skills similar to those of mother tongue by using the second language as a main instruction language (p. 2). This is quite strange as the title of the study is “Bilingual Education of Children”. A group of researchers from McGill University led this experimental study. The researchers selected group of English-language parents who fully used English as their home language and at the same time agreed to enroll their kids in the French school. This study unlike many other studies (ones by McNamaris in Ireland, Davis in Philippines and Richardson in the USA) this one was

longitudinal: Exact description of the research goals, as well as accurate assessment of the results at each stage of the study, regular measurement of the attitudes of the students to the second language speakers.

According to the authors, the assessment component of the project included extended program of pre- and post-test, as well as description of the program and its results. The results of the experiment were judged by comparing achievements of intervention group to the one of control groups, i.e. on the one hand to the English language Canadian students who participated in the traditional instruction of the English language; on the other hand achievements of the control group were compared to the French Canadian students who studied in French schools with the same program as bilinguals. As allowed, all students were selected from the families of the same socio-economic status. In addition to the socio-economic status, researchers also considered such variables as parent education, work experience and attitudes towards that ethno-linguistic groups whose language were kids were supposed to learn.

An extended program of student testing program included: Non-verbal IQ tests (Raven test), Peabody picture test, and series of tests measuring level of student preparedness. All these forms were used during the pre-testing stage. Post-test included battery of tests. Researchers believe that these tests are good measure of the linguistic and cognitive achievements of intervention and control groups.

Out of the above-mentioned tests, I would outline results from the second year of instruction. I believe that these results are very interesting for our purposes as well, however, some major differences in between the experimental programs should be also considered in each section of the comparative analysis. One of the most significant differences is the following: Language of instruction of our students was their native language and the second language was only introduced in the extended day program as part of non-learning behaviors. This factor is so strong that it allows us to use only technical and methodological aspects from the Lambert study. Several general issues can be also considered, such as description of how the formation of bilingualism and student's cognitive development are interrelated. The purpose of the assessments conducted by Lambert group at the end of the second year of instruction was to develop indicators for English-language proficiency. For our purposes, this would include reading skills, expression, vocabulary and speaking skills (retelling, etc.), and word associations. The same skills were measured in the context of French language, as well as results of mathematical proficiency, Lodge-Thorndike test, and language sensitivity test (recognizing unfamiliar phonemes) were analyzed.

Authors of the study believe that findings and conclusions of the study from each stage of the experiment can have important implications; however, they limited themselves to the indicators of the middle-class students of Quebec socio-economic community (p. 103).

The first finding relates to the development of the linguistic skills in the native language when teaching the second language. Authors believe that students do not retard, with slight exception of the spelling skills. Moreover, bilingualism has its advantages, such as understanding and recognizing words. Reading skills were the same in the intervention and control groups. Vocabulary is slightly richer, particularly in nouns and adjectives. Grammatical skills, as well as intonation are at the same level. Achievements are slightly higher in the newly composed units. Spelling equals 70% of the national norms. Specifics of word association are also identical (space, ratio of syntagmic and paradigmic associations).

The second finding relates to the progress of acquiring the second language when it is used as a tool of school education, or as a liaison. Firstly, the progress is higher as compared to the first year of instruction. More specifically, students of the intervention group demonstrate the same level of achievement as those in the French control group (who study in their native language) in such skills as reading and word recognition. However, students of the intervention group demonstrate lower results in the Peabody picture tests. Linguistic skills are sufficiently developed; however, expression skills are weaker in the intervention group as compared to the control group: When retelling or composing a story students in the intervention group used significantly lower number of words than those in the control group. It should be mentioned that while the number of words used were fewer, they were used effectively.

Comprehension of the plot was at the same level in both groups.

Speaking skills were measured by the task, which expected students to retell a cartoon “The Lion and the Mouse”. The following parameters were selected for measuring speaking skills: (a) General expression skills; (b) Grammar skills (percentage of mistakes out of total number of words; (c) Word Pronunciation; (d) Rhythm and Intonation; (e) Duration of the speaking product; (f) Number of produced words. Majority of the indicators were ranked on a 5-point scale by two linguist-experts who worked independently of each other. Points a, b and d had lower results in the intervention group. The rest were the same.

The progress is obvious in the test on the story composition in the second year of teaching. Skills of expressing own opinions and feelings were well developed and all linguistic indicators of this test were at the same level in the control and intervention group. Results are lower only in the grammar –related indicators.

Other findings are related to the completion of arithmetic operations in the experimental and control groups. Test results showed that, despite the second language, students did not have any problems in math reasoning skills. Moreover, students in the intervention group did math operations better than their counterparts in the intervention group.

There were no significant differences found in the sensitivity to foreign

(Russian language) phonemes, although expected by the experts of bilingual education. This enables experts to set age from which bilingual education can promote more sensitivity to language differences and to early development of metacognitive skills. Our team studied the development of linguistic awareness and activation of formal parts of the language among 6-7 year old students (N. Imedadze, 1999). The experimental study did not reveal any advantage in the development of the linguistic analysis among the students of the experimental study. This enables us to conclude that acquisition of the second language (through the latent teaching) is not sufficient precondition for better development of the metalinguistic skills, as some colleagues believe (Ianko-Warrel, 1972). Instruction of the second language creates favorable circumstances for differentiating subject and formal-structural spheres. However, this situation should be properly used during the instruction through the special tools, which direct awareness to the formal parts of the language.

Lambert’s last conclusion refers to a very interesting issue of switching from home to school language and its influence on students’ intellect. This issue is interesting both from the theoretical and practical point of view. Students did not show lower results in any IQ tests used (Lodge-Thorndike test, Creativeness and Raven test). Moreover, students completed the Raven matrixes better (p.105).

These conclusions are based on the through analysis of the standardized measurement system, which enables

researchers to be confident in the effectiveness and reliability of the experimental program. It is worth to consider these findings for any bilingual education program in Georgia. However, the question is - are the indicators used by the authors universal and sufficient for measuring all aspects of the language acquisition?

- 3.1. By exploring the tests from the theoretical point of view we understood that out of two types of tests, (aptitude tests and proficiency tests) we are interested in the second one, which show the level of language knowledge.

The purpose of this test is to measure level of the knowledge of the language, or in the words of Freeze, “acquisition of the sound system with limited vocabulary (i.e. ability to create the product of the listening comprehension) and, on the other hand, to create automatic habit of the structural device into a fact”.

It is obvious that the statement of the famous linguists lacks accuracy in terminology. Measuring of the effectiveness of the methods of the second language requires certain position in the understanding of the learning process, its theory and the language theory. It is impossible to have the same position on this. However, as J. Oller points (1974) out, the language teacher cannot wait until linguists, psychologists, psycholinguists and others agree on this issue. One of those issues which need to be addressed urgently is testing the level of success of teaching.

- 3.2. It has been 30 years since J. Oller made a statement about the common position

among the psychologists and linguists. However, Cummins (2003) still raises the issue about the criteria of methodologically correct studies and the necessity of creating theoretical background for them. I believe that despite the presence of many bilingual education programs and the ones evaluating the effectiveness of these programs, criteria are still undefined.

Cummins summarizes the positions of the advocates and opponents of the bilingual education, who agree on one issue – “Policy related studies are of low quality”.

I would like to list those criteria, which should be met by the methodologically high-quality study:

- The study should compare students included in the bilingual program (i.e. intervention program) and counterparts from the control group;
- Study design should convince us that the first difference between intervention and control group is random;
- Results should be based on the standardized tests (in English);
- Difference between intervention and control groups should be determined statistically.

Cummins analyzes three descriptive works - August and Hakuta (1997), Greene (1998) and Rossell and Baker (1996). The first two emphasize positive features of bilingual education. The third work opposes the idea of bilingual education. Cummins believes that these works meet only one fourth of the criteria of a methodologically high-quality study.

In the analysis of the work by August and Hakuta (1997) Cummins emphasizes two major postulates. On the one hand, the necessity of comparing to the proficiency of the knowledge of the native language (this is the idea of Cummins “hypothesis of linguistic interdependence”). On the other hand, lack of the in-depth analysis of this work can be explained by the isolation of the study from the theory, as well as by not defining the nature of the proficiency and its relationship to the academic development.

The problem of assessing bilingual instruction is further emphasized by the author Chimpolilo in his article published in the Buckingham Journal of Language and Linguistics. The author is very skeptical about assessment methods in bilingual classes in Malawi. As the Chimpolilo points out, the methods are very stereotypical and ignore the cognitive aspects of assessment.

Thus, criteria of the methodologically high-quality studies are rarely met due to the variety of the bilingual education programs (immersion, structured immersion, transitive bilingual education and others). Even in Canada, which is a traditional bilingual country, Cummins offers a different approach for evaluating effectiveness of instruction: **“In most scientific disciplines, knowledge is generated not by evaluating the effects of particular treatments under strictly controlled conditions but by observing phenomena, forming hypotheses to account for the observed phenomena, testing these hypotheses against additional data, and gradually refining the hypotheses into more comprehensive theories that have**

broader explanatory and predictive power”. For comparing, it uses an example from meteorology where scientists do not use any control groups for prediction. I fully agree with Cummins who believes that case study can be used for confirming hypothesis. I think that in the early stage of bilingual education (grades 1-3) not only standardized tests, but also other theoretically approved criteria can be used for assessing effectiveness of the instruction.

Based on his theoretical approach, Cummins offers the following stages of the relevant process of theory and education policy:

1. Identify phenomenon as real and not as a measuring artifact;
2. Identify which theoretical construct will consider the data;
3. Check the hypothesis by using additional data;
4. Elaborate the hypothesis and integrate it better in broader theoretical framework, which provide explanation and accurate prediction.

I believe that for meeting these requirements it is sufficient to conduct longitudinal study of experimental groups. The method can be defined as “structured observation” by using several psychological and linguistic criteria for fixing results.

I agree with those theorists, who believe that effective are those tests, which provide reliable and valid information about the process of teaching and learning, as well as functions as an integral part of teacher-student relation

and gives effective practices for developing linguistic skills. Test of integrated skills, offered by Oller and Carroll, are different from discrete ones by quality. This test does not carry equal diagnostic power when measuring such skills as reading, comprehension, finding omitted item and writing. In 2011, Robert Rantz (Professor of Bilingual and Multilingual Education in Northern Arizona University) argues that linguistic proficiency should be seen as an integrated and not separate phenomenon. Unfortunately, tests of bilingual education used in Georgia are all of discrete nature.

International Literacy Assessment (PIRLS), in which Georgia participated in 2006 and 2011, measured integrated skills, first reading comprehension skills (Kutaladze, 2013). No standardized test is created for Georgian as a second language at the primary level. However, as I mentioned above, standard contains very specific requirements.

PIRLS is a wide-scale assessment of 9-10 year old students. Now I discuss the issues of primary grades. Theoretical approaches refer to the same age group.

- 4.1. For assessing speaking skills among 6-7 year old students developed during non-learning behavior the several psycholinguistic criteria were used. The first important criterion is spontaneity of speaking. We do not see spontaneity as opposite to reaction (The term *spontaneity* is often used by methodology specialists and psychologists without its précised definition). Signs of unpreparedness, from psychological point of view, may

indicate emergence of certain phases of speaking. For example, unaware search for needed words by semantic sings. These linguistic mechanisms are realized for compositing language expression sufficiently adequately, however, without realizing their forms – on an attitude level. Such speaking carries spontaneity signs. The main precondition for it to take place is the first signs of the attitude to the second language.

This sign can be identified by observing, when student creates new expressions during the communication with teachers and other students. The first stage of developing spontaneity is selecting one answer from several options during the verbal games. The next stage is use of unprepared expression.

The second criterion is related to the events related to the normatives of speaking in the second language. I will briefly discuss various types of mistakes as they can be aligned with the criteria of the second language acquisition. The most general meaning of interference is defined as incorporation of the elements of one language in the second one.

Phenomenon of interference is defined as deviation from the norms of any language, which happens in the speaking process of a bilingual person who knows more than one language. The most widespread form of the language interference is the influence of the native language on the second language. Interference is well studied on the phonological and grammar levels. Systemic comparison of the native and

second language may reveal the difficulties in the acquisition of the second language. Overcoming interference is one of the main tasks in the process of the second language instruction. As interference is deviation from the norm, absence of interference is a mandatory indicator of normativity – one of the major criteria of the language knowledge. It should be mentioned that interference is not the main attribute in the development of the second language. Author of a very interesting monograph “Bilingual First Language Acquisition” (2009) Annick De Houwer believes that mandatory interference is only a myth.

It is not sufficient to overcome interference for achieving normativity. There are series of mistakes which violate norms of the second language and at the same time are not influenced by the norms in the native language. Out of these mistakes, which need systematic efforts for fixing and which is the natural result of the second language development? Which mistakes are positive and which mistakes are negative which can be characterized as development mistakes and reflect the strategy of the language acquisition. This is so called “overgeneralization”, through which the student checks his/her own hypothesis about the language structure. There are forms, which are observed in the process of the native language acquiring among 203 year old kids: “goed”, “becomed”, “льзя”, „ვიარებ“, „ვეუთხრებ“, „რებოლბს“, etc.

In the age of 2-3 years the intuitively forms the language rules and generalizes them to all the forms of this category. For example, all English-language kids perceive “ed” as ending of all past tense actions and generalize this rule to all the verbs. Such mistakes show the practical understanding of the structural particularities of the second language. At the same time, it confirms presence of the language mechanism, the main task of which is to introduce language rules from the linguistic environment. This mechanism works during the acquisition of the second language. Its activation during the acquisition of the second language is a productivity indicator and can be used for measuring level of the language knowledge. Rich experience is gained by observing the process of learning Georgian verbs during acquiring Georgian as a second language.

Finally, I would like to refer to the third indicator, communication strategy, which is included in the second language standard. Development of this strategy means that the child developed the need for communication with the bearer of the second language, i.e. with the teacher. By using the third strategy the students adapts its knowledge in the effective model of communication by producing optimal grammar. This is free speaking, which heavily depends on the motivational and need factors and presence of appropriate situation. Absence of appropriate circumstances may not impede the conversation, especially with the child. In the first days of the acquisition of Russian language, such forms are observed as “vot pur”, „Я-пирвела“. In the first case

the phrase is constructed by the child as a Russian form. On the other hand, the second form is perceived by the child as a Georgian word. Children compose such expressions unconsciously. Dimitri Uznadze defines this phenomenon as an attitude / mood of speaking in certain language: The process of speaking is preceded by certain condition, which causes certain powers in, the in the individual, which are necessary for speaking this specific language (D. Uznadze).

Conclusions:

Analysis of the studies showed:

- Assessment of the results of the second language instruction in the context bilingual education requires development and elaboration of the theoretical conceptual framework and bilingual education model;
- On the first stage of the second language acquisition implementation of any program requires specific forms

of assessment which are aligned with the age and abilities of children. Experience of Montreal program by Lambert group and “Latent” Instruction of in Georgia can be used for teaching Georgian as a second language to 6-7 year old students as part of the bilingual education program at the Art lesson (drawing, singing, PE). The lesson should be conducted by the Georgian-speaking teacher;

- It is suggested that for assessing basic speaking skills described in the standard of Georgian as a second language psychological criteria are also used along with linguistic criteria. These criteria can be: spontaneity of speaking expressions, productivity and communication strategies appropriate for child needs and specific context;
- All three criteria are the expressions of the development of the attitude to the second language;
- The best way to address above-motivated criteria is to conduct structured observation.

References:

- Avalishvili, 1961 - ა. ავალიშვილი, ბავშვის მეტყველების განვითარება დაბადებიდან სამ წლამდე, თბილისი, მეცნიერება, 1961.
- Alkhazishvili, 1982 - Алхазышвили, А, Особенности речевой актуализации языкового материала; მეცნიერება, 1982.
- Baker, Jones, 1998 - Baker Colin, Silvia Jones. The Measurement of Bilingualism, in Encyclopedia of Bilingualism and Bilingual Education. Univ. of Wales, Bangor, 1998.
- Chimpololo, 2010 - Chimpololo Andrew. Assessing pupils language proficiency in bilingual education programme: insight from 2 primary schools in Malawi, Buckingham Journal of Language and Linguistics, vol 3,1-10 DOI <http://dx-doi.org>, 2010,
- Houwer, 2009 - Annick De Houwer, Bilingual First Language Acquisition, Multilingual Matters; 2009.
- Norbert, 2011 - Francis Norbert, Bilingual competence and bilingual proficiency in child development, ISBN 0262016397, 2011
- Cummins, 1999-2003 - Cummins Jim, Educational Research in Bilingual Education, Univ.of Toronto, [iteachlearn.org/cummins/ educational research, html](http://iteachlearn.org/cummins/educational_research.html), 1999-2003.
- Jhinkin, 1965 – Жинкин Н. Психологические особенности спонтанной речи. Иностранные языки в школе, 5 12-21.1965.
- Ianco-Warrall, 1972 - Ianco-Warrall, A. Bilingualism and cognitive development. In Child Development, 43,1390-1400, 1972.
- Imedadze, 1982 – Имедадзе Н. Вопросы определения уровня овладения вторым языком; Вопросы Психологии обучения второму языку. მეცნიერება, 1982.
- Imedadze, 1984 - Imedadze N., A Description of a Program of Experimental Teaching of Russian Language..in Georgian Elementary School, *Contemporary Educational Psychology*. 9, 269-274, 1984.
- Imedadze, Tuite, 1992 - Imedadze Natela and Kevin Tuite. Acquisition of Georgian. in D.Slobin (ed) *Crosslinguistic Study of Language Acquisition vol.3*, Laurence Erlbaum Publ. London, 39-111, 1992.
- Imedadze, 1999 – Imedadze N., The Development of metalinguistic ability in bilingual conditions, VIII International Congress for the Study of Child Language, San Sebastian, 171-172. 1999.

- Kutaladze, 2013. - PIRLS 2011; წიგნიერება, მოსწავლეთა მიღწევა და მასთან დაკავშირებული ფაქტორები, გამოცდების ეროვნული ცენტრი, 2013
- Lambert W. Tucker, 1972 - Lambert W. Tucker G, Bilingual Education of Children, Newbury House Publisher, 1972.
- Oller, 1973 - Oller J. Discrete – Point Tests of Integrative Skills in Pragmatic Perspectives for the Language Teachers(ed. Oller J and Richards J. Massachusetts, 1973.
- Slobin, 1973 - Slobin D. Cognitive Prerequisites for the Development of Grammar, in Studies of Child Language Development, Ferguson, Slobin (eds) N.Y. Holt 175-208, 1973.
- G2 curriculum - ქართული, როგორც მეორე ენა, სტანდარტი, 2012, მეცნიერების და განათლების სამინისტრო, 2012.
- Uznadze, 2003 - დ. უზნაძე, ბავშვის ფსიქოლოგია, თბილისი, “ქართუ”, 2007.
- Uznadze, 1947 - დ. უზნაძე, ენის შინაფორმა, ფსიქოლოგიის ინსტიტუტის შრომები, ტ4 “მეცნიერება”, 165-190, 1947.