



INTERNATIONAL BLACK SEA UNIVERSITY
FACULTY OF EDUCATION AND HUMANITIES
PhD Program in Education Sciences

**Strategies-Based Syllabus and Materials Design for Teaching English for Specific Purposes
(ESP) Vocabulary to University Students Majoring in Agriculture**

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**Extended abstract of
Doctoral Dissertation in Education Sciences**

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INTRODUCTION

Nowadays English for Specific Purposes (ESP) is not just one of the courses studied by students at a university. Even where tuition is done in students' native language, much of the independent reading in specialty is done online, where most materials are in English. To be able to read for the professional development during the education at university and, what is especially important, after it one needs a considerable amount of vocabulary known and potentially understood professional text. This is why to possess effective strategies of vocabulary direct learning, on the one hand, and its "picking up" in the process of reading and listening, on the other, is essential for both language learning and professional competence.

Vocabulary is an essential skill in foreign language teaching. According to Asgari and Mustapha (2011), Gu (2003), Kitchakarn and Choocheepwattana (2012), Koosha and Salimian (2010), Letchumanan and Tan (2011), Richards (2002), language teaching researchers agree that vocabulary skills are essential for communicative competence. As Wilkins (1972, p. 111) puts it, "without grammar, very little can be conveyed, without vocabulary nothing can be conveyed." Jalongo & Sobolak (2011) have shown the positive impact of vocabulary acquisition on reading comprehension and interest towards reading. Ali et al. (2012), as well as Mokhtar et al. (2010) in their studies revealed that a low level of vocabulary skills can substantially hinder the development of speaking, listening and writing skills. Ali et al. (2012) has found that the lack of vocabulary skills causes problems not only in reading comprehension, but also generally in academic skills.

What makes teaching vocabulary to students majoring in agriculture so **significant** at Georgian universities is the following:

1. Agriculture has been declared as one of the priorities of the development of Georgian economy (The Ministry of Agriculture of Georgia, 2016; 2015), correspondingly, the country needs specialists in agriculture who will be able to use innovative approaches due to their knowledge of the field as well as of agricultural English (as the majority of news are published in English).
2. Insufficient research carried out in the sphere in ESP in Georgia and an insufficient number of existing international textbooks in the sphere of agriculture.
3. The Agricultural University of Georgia possesses a Vet-Clinic, the Georgian Culinary Academy equipped with updated contemporary technologies. The latter is of particular significance since the University cooperates with association of professional chemists of

Georgia in their mutually established Test-lab. In order for students to study and work efficiently in the clinic, academy and lab; to communicate with invited foreign specialists and experts they need to be aware of specific professional communicative language based on field-related terms.

4. The University has various different study and funding opportunities for students and since they have a great chance to be exposed to real life language in the context, they need to know the basics of ESP along with General English (branch-related vocabulary in particular).

Although since the 1990s much has been done in Georgia concerning the development of teaching ESP, insufficient research has been carried out on the efficiency of the teaching, especially related to vocabulary learning strategies. Based on the experience and the communication with the colleagues, the researcher can state that the volume of the ESP vocabulary that students and graduates of majors in agriculture in Georgia is not sufficient for the purposes of professional communication and that they do not possess effective strategies to cope with the vocabulary challenges. Thus, the **problem** of the research embrace the need to develop a clear understanding of ESP vocabulary learning strategies and a network of activities that will enable the graduates of the agricultural majors and other ESP spheres to continue enriching their professional vocabulary in the process of their careers.

The **goals** of this doctoral dissertation were:

- To clarify the definition of the term “vocabulary learning strategies” and to suggest such a typology for them, that would be effective for ESP teaching
- To analyze and systematize the existing literature on the issue of strategies-based syllabus and materials design for teaching ESP vocabulary to university students in general and majoring in agriculture in particular,
- To develop a strategy-based syllabus for teaching English for agriculture with a special emphasis on vocabulary teaching / learning, prepare adequate learning materials and activities,
- To find out the state of ESP (for agriculture) vocabulary teaching and learning in Georgia, and, based on it, to define the directions of improvement,
- To apply the developed syllabus and materials in teaching in order to find out their efficiency

The **hypothesis** of the study was:

In order to increase the efficiency of ESP vocabulary teaching to students majoring in agriculture and to impact positively their satisfaction and self-confidence levels, it is necessary:

- To teach various layers of vocabulary (common English vocabulary frequently used in ESP / agricultural texts, common academic English, common agricultural English and narrow – according to the specialization of the student – specific vocabulary)
- To develop a vocabulary-strategies-based syllabus
- To employ activities teaching vocabulary and vocabulary-learning strategies, to realize the developed syllabus

The **methods of research** were:

- Literature analysis the studied issue and drawing theoretical conclusions based on it
- Application of questionnaire surveys to study the state of the matter on the researched issue, also to compare control and experimental groups' student satisfaction before and after the experiment
- Experiment, involving a control group taught in the 'traditional' way (less oriented on VLSs) and an experimental group taught in the way corresponding to the hypothesis (VLS-based)
- A pre- and post-experimental interview was held to the experiment participants – some students and the teacher - in order to find out whether there was any change in the attitude to the way vocabulary was taught.
- Statistical analysis of the data obtained via questionnaire and experiment

Thus, the methods of research were quantitative and qualitative. However, some qualitative data were also gathered as result of some open-ended questions in the questionnaires.

Novelty

Although teaching ESP (and the very term 'ESP') is relatively new for Georgia. Since the 1990s certain practical achievements have been gained in the country in connection with it. Many teachers of English at faculties not majoring in English have gained the knowledge of the difference between general English and ESP; they apply corresponding textbooks and methods of teaching. However, few enough research have been carried out to study these achievements and the existing challenges (Doghonadze, 2011; Kadagidze, 2016; Kutateladze, 2014; Zoranyan, 2008). No such research has been conducted in Georgia dealing with strategy-based vocabulary teaching to students majoring in agriculture.

Theoretical value

The theoretical bases of my research are:

- Nature of ESP (Dudley-Evans & St. John, 1998; Hutchinson & Waters, 1987; Strevens, 1988);

- Strategy-based learning (Canale & Swain, 1980; Chamot & Kupper, 1989; Dornyei & Thurrell, 1991; Flavell, 1979; Noles & Dole, 2004; Oxford, 1990, 2003);
- Theories of language (in particular, vocabulary) teaching, learning and acquisition (Krashen, 1989; Laufer, 2003, Nation, 2001; Richards, 1990).

The theoretical value of the dissertation deals with the analysis and systematization of the existing theories of ESP syllabus and curriculum development, vocabulary teaching, language learning and vocabulary learning strategies, development and classification of activities for VLS development in students. A model of teaching ESP based on a strategy-based vocabulary teaching has been suggested in the dissertation and its efficiency has been tested experimentally.

Practical Value

The practical recommendations on how to improve ESP vocabulary teaching, which VLSs to develop, what activities to employ constitute the practical value of the research. They will be useful for ESP teachers and researchers. The practical materials that the dissertation contains can be applied by ESP teachers, also the syllabus developed for English for agriculture may be applied directly (with the same textbook) or in a modified way.

Structure of dissertation

The dissertation involves introduction, 3 chapters, conclusion, and 4 appendices (6 Ap. tables). There are 19 tables and 5 figures in it.

CHAPTER I -THEORETICAL BACKGROUND (LITERATURE REVIEW)

The chapter presents a historic overview of the development of ESP, specific features of agriculture as a sphere of ESP, teaching vocabulary, strategies of teaching and learning vocabulary, some activities for developing vocabulary learning strategies, the relationships between VLSs and classroom management, approaches to ESP syllabus and materials design and age peculiarities of university students dealing with vocabulary learning. It has been emphasized that the volume of vocabulary involved in any ESP is too large to be taught in a one or two-year course at university. This is why it is essential not only to teach the basic professional language, but also to develop students' abilities to guess the meaning of the unfamiliar vocabulary in the process of reading and listening, to compensate the lack of vocabulary for production purposes in the process of speaking

and writing, and to enable students to continue the enrichment of their vocabulary stock on a lifelong basis. This can only be done if language learning strategies and in particular vocabulary learning strategies are explained, practiced and developed.

It has been shown that strategic learning is absolutely relevant to the adolescents' and young adults' level of mental development, so teaching learning strategies is adequate for university students. ESP vocabulary learning strategies should be defined, and relevant activities should be developed, to provide their effective acquisition by ESP learners. As contemporary syllabi, textbooks, and activities offered in them contain too little information on vocabulary learning strategies or activities enabling the person to develop these strategies, new (modified) syllabi should be developed in order to better serve these purposes.

CHAPTER 2. PRACTICAL ISSUES OF SYLLABUS AND MATERIALS DESIGN IN ESP FOR UNIVERSITY STUDENTS MAJORING IN AGRICULTURE

The chapter deals with choosing and assessing the ESP textbook. It includes a questionnaire for teachers and students, made up to assess the textbook, to see how the book is adequate generally and especially for vocabulary teaching to make the researcher's assessment more objective. The assessment in Likert scale format (1 – completely disagree, 2 – rather disagree than agree, 3 – have no definite opinion, 4 – rather agree than disagree, 5 – completely agree) was used. The questionnaire was fulfilled by volunteer teachers (10) and MA students (50). According to the questionnaire results, it is possible to say that students are also more or less satisfied with the textbooks, however, they are, on the whole, more critical than teachers. The items that the students are least satisfied with are too much unfamiliar vocabulary and vocabulary tasks being not helpful enough for vocabulary memorization. This also supports the hypothesis of this dissertation, showing that students are not sufficiently satisfied with teaching vocabulary.

The chapter views the activities for developing productive and receptive strategies of dealing with vocabulary, classifies them and gives concrete examples. The existing at the Agricultural University of Georgia syllabus for an MA course in English for agriculture is analyzed, and its strategy-based modification is offered.

CHAPTER III. EXPERIMENT CONDUCTED AT THE AGRICULTURAL UNIVERSITY OF GEORGIA TO TEST THE HYPOTHESIS

In this chapter the **hypothesis** of the dissertation was tested, namely, two groups were formed, the traditional and the experimental one, which would be about the same size, involve students of approximately the same age who possess approximately the same level of English skills, use the same coursebook (O’Sullivan & Libbin, 2011) for their development, spend equal time on learning English for agriculture and differ only in (see table 3.1):

Table # 3. 1. Difference between teaching in the control and experimental groups

Control group	Experimental group
Teaching only general agricultural terminology	Teaching three layers of vocabulary (general vocabulary often applied in agricultural texts, general agricultural vocabulary, and narrow (dealing with particular student’s areas of specialization) specialty vocabulary
Fulfillment of vocabulary activities without an emphasis of VLSs	Purposefully developing VLSs, including them in vocabulary activities
Traditional, university-approved syllabus (non-strategy-based)	Experimental syllabus (strategy-based)

The study was conducted at the Agricultural University of Georgia in Tbilisi, Georgia during the third (for the MA students) semester of 2015-2016 academic years. The experiment began at the beginning of the third semester in March and lasted for 15 weeks. A permission to conduct the experiment was obtained from the university administration. All students who participated in the experiment expressed an oral agreement to be part of it. They also knew any of them could quit the experiment any moment if they believed it was somehow harmful for their studies.

During the experiment, English for agriculture was taught four hours per week to the students, while two hours per week were dedicated to experimental teaching; during this time the learners took a pretest, a while-test, an immediate post-test and a delayed post-test. The pre-test was held in the first week of the semester, the while-test 1 – after a month, while-test 2 – after two months, and the post-test – at the end of semester. The experiment occurred during the spring semester of 2015/2016 academic year, while the delayed post-test was held in November 2016 –

almost 4 months later. Besides, a pre- and post-interview was held in both groups to find out whether there was any change in the attitude to the way vocabulary was taught.

Participants and procedure

There were 60 freshman Master's students at the university at the moment when the experiment started. All students agreed to participate in the experiment, and thirty of them were selected at random, however, some of them later suspended their status, so by the end of the experiment there were 26 MA students.

After the administrative permission was obtained, 30 students were randomly distributed into two groups:

- a) one experimental (strategy-based vocabulary teaching) group (eventually with 13 students)
- b) one control (traditional instructional) group (eventually with 13 students)

The volunteer students were placed to experimental and control groups at random, to provide the objectivity of the results. Their English skills level before the start of the experiment was B1/B2, measured by the pre-test.

The participants were explained that they are taking part in an experiment the goal of which was to improve the quality of teaching English for agriculture, however, they were not informed which group was the control and which – the experimental one. The participants were promised that no personal information about them, including their grades and opinions, would be made available to the public, all results would be anonymous and would be used only for the sake of research (would not influence them personally or academically).

Measurement tools

To measure the participants' level of vocabulary skills a vocabulary test for the students of agriculture was used. It was not an achievement text, based on the materials studied, but a proficiency test, showing how the students could deal with vocabulary, both familiar and unfamiliar, to solve the professional problems. The tests used on both groups for the pre-testing, while-testing-1, while-testing-2, post-testing and delayed testing were the same by the structure, assessment. This was done in order to provide the comparability of the results.

Table # 3.2. Test structure and assessment system

Task #	Task type	Assessment
1	Fill in the gaps in the text from the box.	20 points (2 points for each

		correct answer)
2	Read the text and then match the terms with the definitions.	20 points (2 points for each correct answer)
3	Based on the same text, fulfill the true/false/no information task.	20 points (2 points for each correct answer)
4	Listen to the micro-text, and do the multiple-choice task.	20 points (2 points for each correct answer)
5	Use the given words to make up sentences.	20 points (2 points for each correct sentence)

To measure the students' attitudes towards vocabulary teaching both groups were given a questionnaire. They had to measure in terms of five points how much they agree with the given statement (a Likert scale: 1- completely disagree, 2 – more disagree than agree, 3 – do not have a clear opinion, 4- more agree than disagree, and 5 – completely agree). Some statements were formulated in a positive way (e.g., I believe that vocabulary taught during the lessons is professionally useful), while some – in the negative / critical (e.g. the texts and the activities require the knowledge of too much vocabulary), in a mixed order, not to lead the students towards the result desirable for the researcher. In this way reliability and validity of results were provided. Before using the questionnaire for the purposes of the experiment, it was applied in another group of students of agricultural English for the same reason. The items that were found misleading or contradictory were dropped.

Results and discussion

The mean results and the standard deviations of both groups were calculated. The results of the control group revealed a gradual and slow increase (55→59 points) during the experiment, but, after the English classes were no longer held, they reasonably decreased approximately to while-test 1 results (56 points), which is natural as no practice in English was provided. The results are shown in figure 3.1.



Figure 3.1. Control group test results

The results of the experimental group revealed a gradual and a relatively fast increase (55→68 points) during the experiment, which show the success of the experimental approach and is in agreement with earlier held researches (Lai, 2013; Macaro & Erler, 2008; Mizumoto & Takeuchi, 2009; Urlaub, 2012). However, after the English classes were no longer held, they reasonably decreased (67 points), which is natural as no practice in English was provided. On the other hand, the results were even a little higher than the while-test 2 results. It is necessary to emphasize that the decrease was smaller than in the control group, which also indicated to the fruitfulness of the experimental approach. The results are shown in figure 3.2.

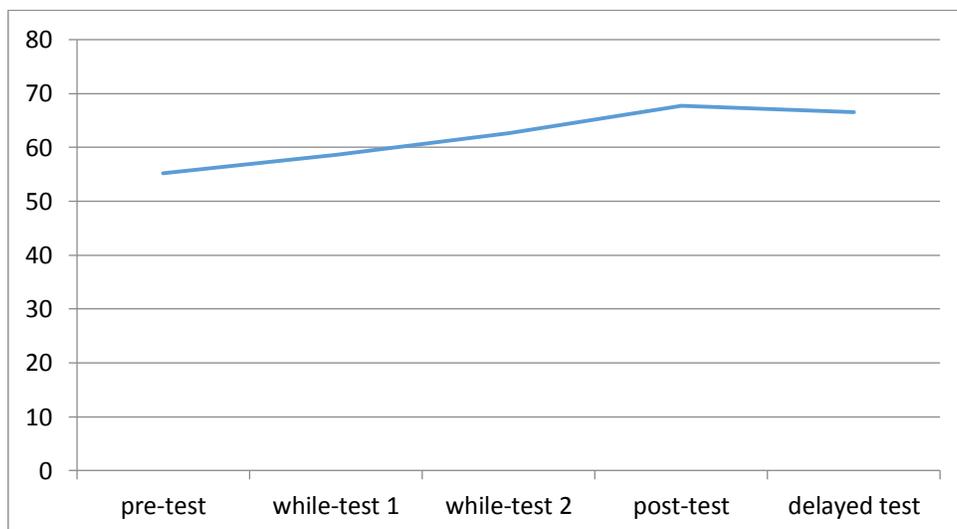


Figure 3.2. Experimental group test results

Concerning the standard deviation and its change, it is possible to say that the groups were homogeneous enough (standard deviation between 6.36 and 8.23, which is below 10). In the process of the experiment it was decreasing, so the groups were becoming more homogeneous. This reveals that both approaches to teaching are equally efficient for all students.

To see whether the control group really improved and the experimental group really improved and whether there is a statistically significant difference between their results, paired sample t-test was applied, using the SPSS program.

Table 3.3 contains the summary of experiment results, while Table 3.4 provides the necessary data to calculate whether the difference between the text results in the control and the experimental group between the pre-test and while-test 1 is statistically significant.

Without any statistic tests it is visible from table 3.1, that there is no statistically significant difference between the mean pre-test results of both groups (55.23). If we compare all test results' dynamics (from pre-test to post-test) in both groups (tables 3.2, 3.3 and 3.4), we will see that at 95% confidence interval the results between the groups have been found statistically different, since the 2-tailed significance = 0.113 is more than 0.05. A very high correlation of 0.999 has been found between the approach and its results.

Table 3.3. Summary of experiment results

Student number	Pre-test mean	Pre-test standard deviation	While-test 1 mean	While-test 1 standard deviation	While-test 2 mean	While-test 2 standard deviation	Post-test mean	Post-test standard deviation	Delayed test mean	Delayed test standard deviation
13	55.23	7.16	56.08	6.76	57.46	6.77	59.07	6.49	56.23	6.35
13	55.23	8.23	58.61	7.96	62.69	7.38	67.69	7.02	66.54	7.67

		control group	experimental group
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Table 3.4. Paired Sample statistics for the results of the control and experimental groups

	mean	Number of measurements	St. dev.	St. error mean
Control group	56.9600	4	1.68022	0.84011
Experimental group	61,0550	4	5.37293	2.68646

Table 3.5. Paired samples correlation for the results of the control and experimental groups

	N	correlation	Sig.
Control/experimental group	4	0.999	0.001

Table 3.6. Paired samples Test for the results of the control and experimental groups

	Paired differences					t	df	Sig. (2-tailed)
	mean	Std. dev.	Std. error mean	95% confidence interval of the difference				
				lower	upper			
Pair 1 control and experimental groups	-4.09500	3.69604	1.84802	-9.97622	-1.78622	-2.216	3	0.113

As it has been mentioned, a questionnaire was applied to both groups before and after the experiment in order to see, whether their difficulties and satisfaction dealing with vocabulary learning have changed due to the traditional and experimental treatment. Within the 5-point Likert scale, the mean results above 3.5 can be viewed as a strong agreement with the item.

Table 3.7. Comparison of mean results of pre- and post-questionnaires in the control and experimental groups

Questions / results	Control group		Experimental group	
	Pre-q.	Post-q	Pre-q.	Post-q
1. I believe that vocabulary taught during the lessons is professionally useful.	3.85	4.23	3.77	4.23
1. The texts and the activities require the knowledge of too much vocabulary.	3.31	3.08	3.31	2.85
2. When I come across a word I do not know/remember, I feel at a loss, and it is difficult for me to keep reading / listening.	4.31	3.92	4.08	2.69
3. When speaking / writing, if I need some word I do not know, I get stuck, and may be unable to complete the task.	3.92	3.46	3.49	2.46
4. I manage to memorize most the vocabulary taught.	3.31	3.85	3.31	4.08
5. I believe that the course helps me to enrich my vocabulary.	4.08	4.31	4.00	4.54
6. I often make wrong guesses when trying to understand the meaning of unfamiliar words.	3.31	3.00	3.31	1.69
7. Dictionary is not of a great help for me, as too many meanings are given there for the same words.	3.38	3.08	3.15	2.46
8. The teaching on the whole prepares me for the midterm and final exams.	3.62	3.92	3.85	4.38
9. I can deal with vocabulary problems while listening to, speaking about, reading and writing on agricultural topics.	3.38	3.46	3.69	4.38

- It is possible to see that the students of the control group quite positively viewed the professional usefulness of the vocabulary taught to them (3.85), this feeling increased towards the end of the course (4.23) – an increase by 0.38 points or 9.9%. The initial viewpoint of the experimental group is a little lower (3.77), anyway, high enough. Post-experimental

questionnaire gave a really higher mean assessment by the experimental group (4.23). This shows that the applied strategies of vocabulary teaching have significantly raised the students' satisfaction – an increase by 0.46 or 12.2%.

- The dissatisfaction of the students of the control group with the required vocabulary skills' level is not too high, but quite weighty (3.31). It to some degree decreases as result of learning (3.08) – a decrease by 0.23 or 6.9%. The initial level of dissatisfaction of the experimental group is the same (3.31). However, it has impressively decreased as the result of the experimental treatment (2.85) – by 0.46 or 13.9%.

- The control group students' self-confidence, due to poor vocabulary, is low, this is why coming across an unfamiliar word creates grave problems for continuing reading or listening (4.31). Although in the process of tuition this problem has decreased, it is still quite grave (3.92) – the decrease by 0.39 or by 9%. Before the experiment unfamiliar vocabulary is a great obstacle for the experimental group students, too (4.08). However, the situation has dramatically improved by the end of the experiment. Now they possess strategies to overcome this problem and feel more self-confident (2.69) – a decrease by 1.39 or **34.1%**.

- The control group students experience serious enough problems, when they are unable to recollect the needed word for speaking or writing (3.92), however, the problem is lighter than with reading and listening, probably, because their ability to paraphrase is better than their ability to elicit meaning. After the experiment, they get stuck more seldom (3.46), as their vocabulary stock has been enriched – the problems decreased by 0.46 or 11.7%. With the experimental group students, the lack of vocabulary is a reasonably serious reason for getting stuck (3.49), while speaking and writing, most probably due to the same reason as for the control group students. After the experiment, their paraphrases skills have increased, and the problem has dramatically decreased (2.46) – by 1.03 or **29.5%**.

- The students of the control group before the experiment manage to memorize a reasonably good amount of the taught vocabulary (3.31). With the practice, this ability has reasonably increased (3.85) – an increase by 0.54 or 16.3%. In the experimental group, initially the students were able to memorize the same amount of the taught vocabulary, as the students of the control group (3.31). After the experiment, their ability has substantially increased, due to the application of beneficial strategies (4.08) – by 0.77 or **23.3%**.

- The students of the control group initially largely believe that the course would increase their vocabulary skills (4.08). After the experiment, their opinion has improved to a certain

degree (4.31) – by 0.23 or 5.6%. The students of the experimental group also had quite positive expectations for the course (4.00). Their satisfaction with the course was considerably higher than their expectations (4.54) – by 0.54 or 13.5%.

- The students of the control group quite often made wrong guesses while trying to elicit the word meaning (3.31). With the practice, this problem has decreased (3.00) by 0.31 or 9.4%. The students of the experimental group initially also used to make wrong guesses (3.31), but by the end of the experiment, their number of wrong guesses has dramatically decreased, due to the development of the corresponding strategies (1.69). This item showed the most dramatic decrease (by 1.62 or **48.9%**), which means that the suggested approach is especially efficient for the development of meaning elicitation strategies.

- Many enough students in the control group think that dictionary is not too helpful for them (3.38). At the end of the experiment, with practice, dictionary has become somehow more useful for them (3.08) – by 0.3 or 8.9%. For the experimental group the situation was similar in the beginning of the experiment (3.15), while after the experiment the dissatisfaction with the dictionary application has decreased (4.46) more than in the control group – by 1.31 or **41.6%**.

- The students of the control group reasonably believed in the beginning of the experiment that the teaching on the whole would prepare them for exams (3.62). This belief has somehow been strengthened by the end of the experiment (3.92) – by 0.3 or 8.3%. As for the experimental group students, their expectations for the course were also reasonably high (3.85) (in both cases, probably, based on the Bachelor course of English). After the experiment, their belief has strengthened more than in the control group (4.38), having reached quite a high level – the change by 0.53 or 13.8%.

- Before the start of the experiment many of the students of the control group believed that they can deal with vocabulary problems arising in the process of communication (3.38). After the experiment their self-confidence has symbolically increased, due to practice (3.46) – by 0.08 or 2.3%. The students of the experimental group initially had reasonably high beliefs that they could deal with vocabulary problems in the process of communication (3.69). After the experiment, the students of the experimental group believed they almost did not experience vocabulary problems in the process of communication (4.38). The growth of self-confidence is by 0.69 or 19%.

Limitations

The study was held with just 26 MA students at only one university in Georgia. The experiment lasted for one semester (dealt with teaching agricultural English to one batch of master students). Although there is no other university in Georgia which teaches English for agriculture, research that would give more generalizable results should be held at the same university for a longer time, for several semesters, in order to increase the number of the participants, to make the results generalizable for Georgia. Also, it should spread to other ESP courses, such as English for Business, English for Science and Technology, etc. and be held in various countries, to offer far-reaching conclusions. Still, as literature analysis is supported by this research, and the statistical treatment of the data has been fulfilled, the conclusions do have a certain theoretical value.

Thus, the hypothesis of the research has been tested experimentally. The students of the experimental group were taught ESP (agricultural) vocabulary according to the developed syllabus, based on VLS, the selected (3-layer) vocabulary and the specially worked-out activities based on the strategies of vocabulary memorization, recollection and application. The results of the experiment show that:

- a) Both groups increased their level of vocabulary skills, so, both the traditional and the experimental approaches are characterized by efficiency;
- b) The experimental group showed an increase in results (55.23 points in the pre-test and 66.54 in the delayed test) that is higher than the control group (55.23 in the pre-test and 56.23 in the delayed test), and the difference is statistically significant.

These results support the hypothesis of the study. Besides, all items of the questionnaire show that:

- a) Initially students of both groups had problems with learning vocabulary and its amount in their stock, although they had in general a positive attitude towards the course and an understanding of the need to learn vocabulary.
- b) Students of both groups said they benefitted from the educational process, however, the improvement of the control group is from symbolic to average, while the improvement of the experimental group is each time more impressive than that of the control group, it is always higher than in the experimental group, both by an absolute value (how many points

it increased) and relatively (the increased percentage). The improvement in the experimental group is especially impressive in items 7, 8, 3, 4 and 5 (22.3% - 48.9%), all dealing with VLSs development.

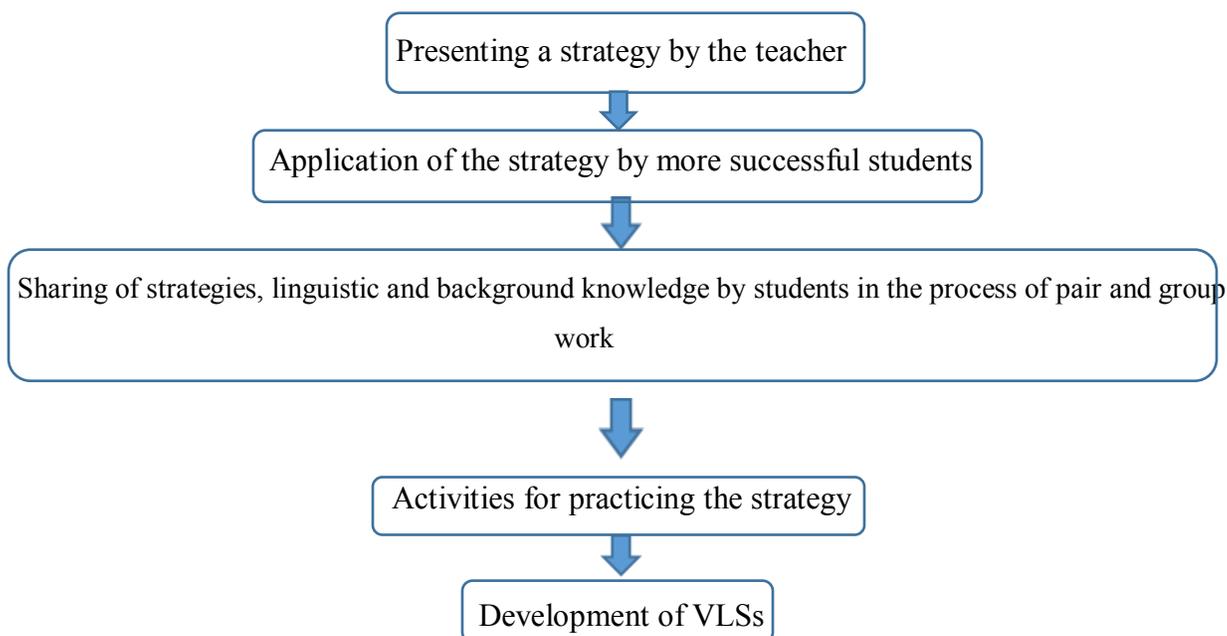
Thus, the comparison of the results of the questionnaires held before and after the experiment in the control and experimental groups support the hypothesis of the research.

CONCLUSIONS AND RECOMMENDATIONS

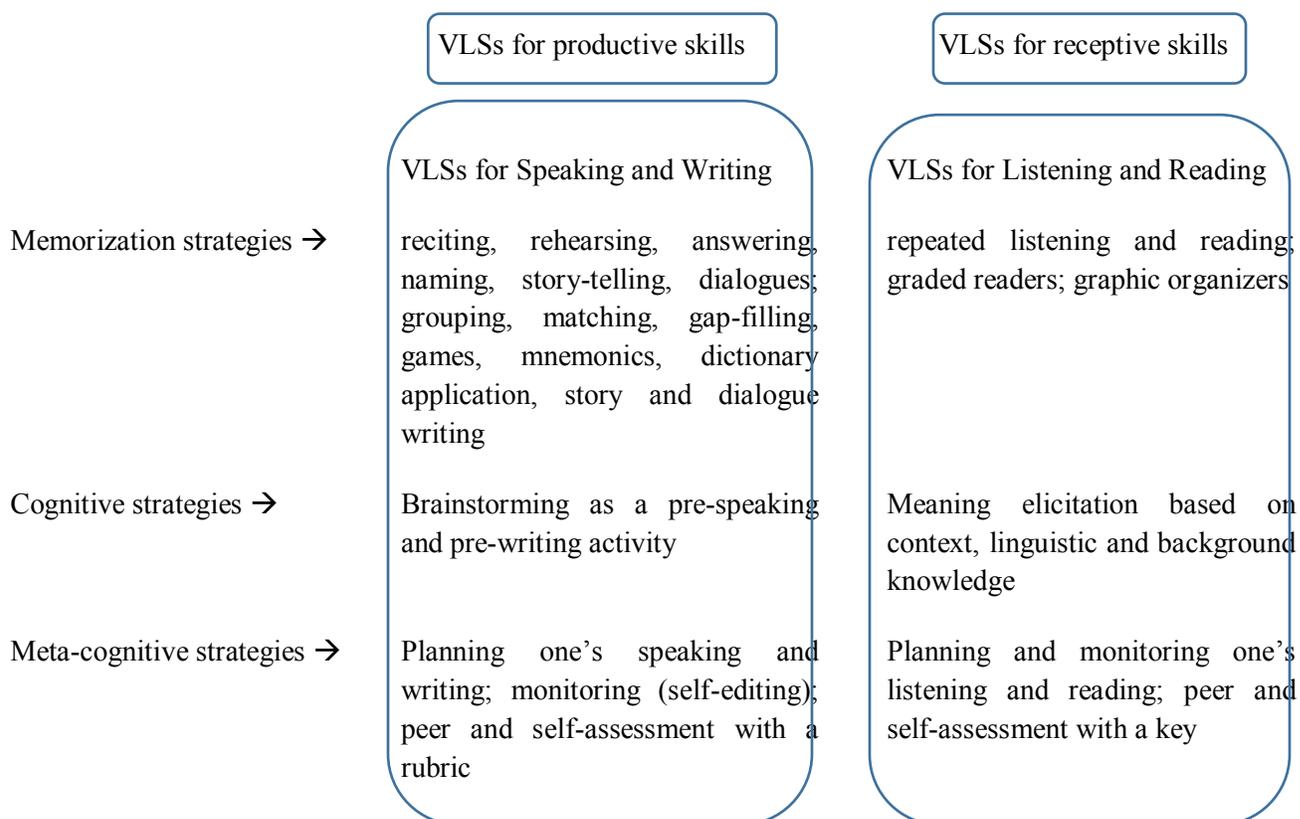
1. English for specific purposes or ESP first appeared as a branch of linguistics studying the peculiarities of professional language after the WWII. Later, teaching ESP differentiated from teaching General English (GE), based on the conducted linguistic studies. Since the 1980s ESP is an important sphere of teaching English as a Second (ESL) or Foreign (EFL) Language. Teaching ESP in tertiary education nowadays is / should be compulsory for students not majoring in English, as their ability to grow professionally in the process of their careers depends on it. Teaching ESP in Georgia started in the 1990s, there are some achievements in the sphere, but the scientific study of the teaching has almost not been done.
2. Vocabulary is the essential component of language learning in general and ESP communicative skills, in particular. This is why it is necessary that teaching vocabulary be carried out really efficiently. However, the surveys held by the researcher at both BA and MA level at the Agricultural University of Georgia reveal that students only reasonably satisfied with the used ESP textbooks, syllabi, materials, activities and teaching methods. 107 BA students, for instance, yielded a satisfaction level with the textbook and the activities between 2.7 and 3.1 in a 5-point Likert scale. Fifty MA students' satisfaction level was found between 3.42 and 5 in a 5-point Likert scale, which is not bad, but for the item concerning the development of vocabulary-learning strategies and students' self-confidence concerning vocabulary application, the assessment was rather low (3.42-3.76). As for the 10 teachers, their assessment of the applied textbooks varied between 4.4 and 5.0, however, again, the item dealing with the development of VLSs yielded the lowest result (4.4).
3. Language learning strategies substitute rote memorization requiring much time to master even a limited amount of vocabulary. Meaningful attitude towards it permits to practically unlimitedly widen the language learner's vocabulary stock, raising learning to higher, cognitive and meta-cognitive levels. The near-native knowledge of ESP vocabulary does not

mean the knowledge of all words and terms employed in the given professions field, but it implies such knowledge of it, when the student is able to comprehend well enough each text heard or read and express his/her ideas in oral or written form, by effectively eliciting the unfamiliar words' meaning and paraphrasing the missing in the stock word to express one's ideas.

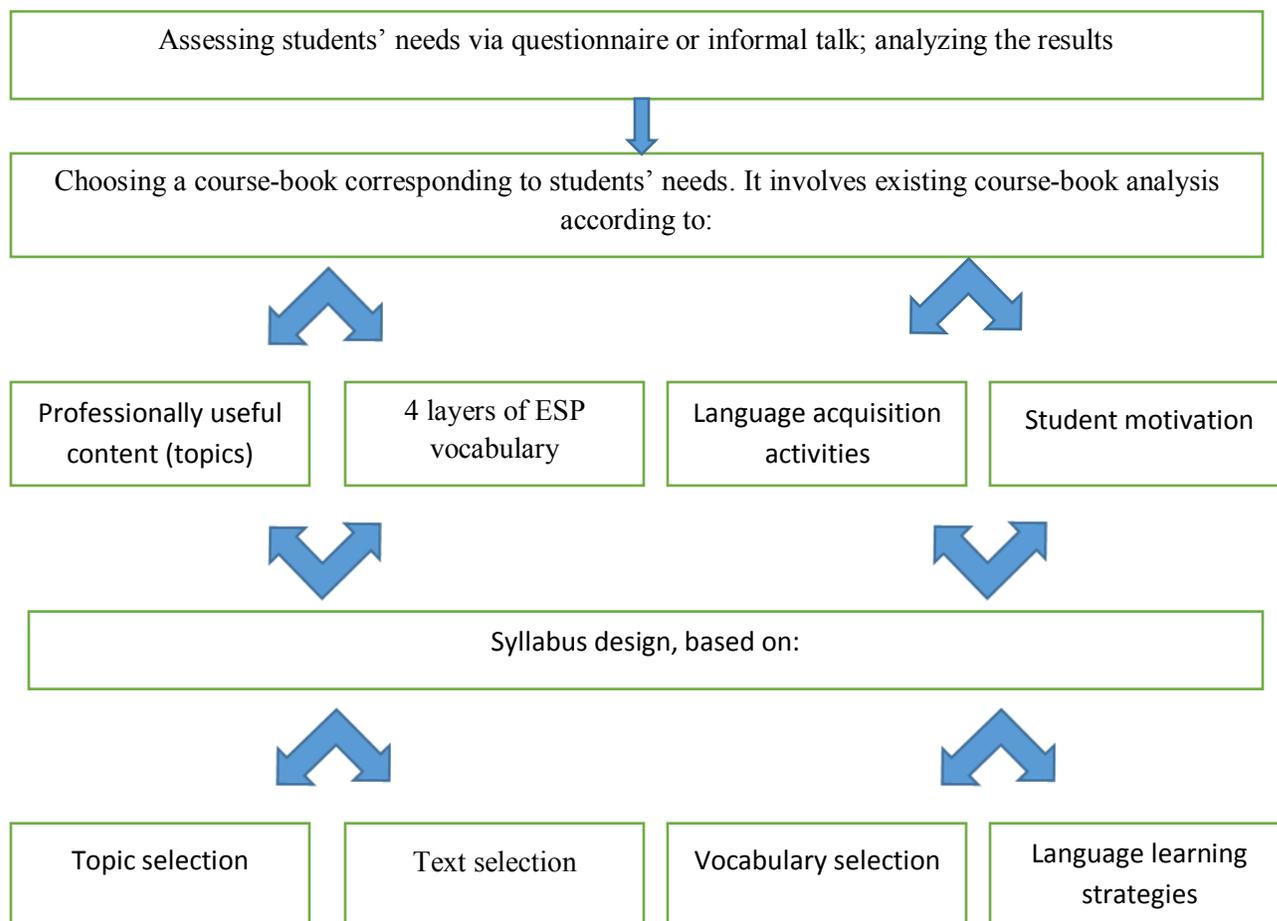
4. Oxford (2003, p. 8) defined language learning strategies as “specific actions taken by the learners to make learning easier, faster, more enjoyable, more self-directed, more effective and more transferable to new situations”. Takač (2008) defined VLSs strategies as particular strategies used for learning vocabulary in either general English or ESP. Laufer (1998) concluded that learning vocabulary for speaking and writing, as productive skills, requires different strategies, while learning vocabulary for listening and reading, as perceptive skills, requires different strategies. Thus, special strategies are needed to teach ESP (agricultural) vocabulary productively and receptively.
5. English for agriculture is essential for Georgian tertiary education, as agriculture is one of the priorities of the country's development. As the state of teaching English for agriculture in Georgia is not optimal yet, as the above-cited investigation has shown, it is necessary to develop such a model of VLSs for the ESP which would improve significantly the existing situation. Such a model was developed in the dissertation. Schematically it looks as:



6. Only few students intuitively develop the learning strategies. For the majority of students the VLSs do not develop automatically, by themselves, but in the process of vocabulary learning activities with teacher's and more strategically thinking students' help. The activities used in the traditional approach are the same, the difference lies mostly in the feedback provided by the teacher / more knowledgeable students, which does not simply state whether the activity was fulfilled correctly or incorrectly, but emphasizes the strategies that should be used in order to successfully fulfill the activity. The cues and hints that the teacher gives are essential for the development of VLSs.
7. The VLSs for teaching ESP look as:



8. The vocabulary learning strategies-based ESP syllabus and materials design, according to the model worked out in the dissertation, should occur as follows:



9. The developed in the dissertation VLS-based syllabus for teaching English for agriculture, as well as the selected vocabulary and the designed activities have been tested in the process of experimental study. While the control group students' vocabulary skills showed a statistically significant increase by 3.84 points (7%), which after the delayed test became a statistically insignificant change (1 point or 1.8%), the experimental group students' improvement was much more impressive (by 12.45 points or 22.6% between the pre- and post-tests and by 11.31 points or 20.5% between the pre- and delayed tests). More than that, the comparison of the results of the questionnaire concerning students' opinions of vocabulary learning before and after the experiment held with the students supported the testing results and has revealed a great improvement with the experimental group of students (minimum by 12.2% and maximum 48.9%, for some questions), while the improvement of the control group is more modest (minimum 2.3% and maximum 16.3%)

10. As the suggested model of vocabulary teaching, the worked-out syllabus and the developed activities proved to be effective with the given group of MA students, they can be recommended for a wider application. The practical recommendations to the teachers teaching English for agriculture are:

- Teach four layers of vocabulary, not only general agricultural terminology (general vocabulary often used in texts on agriculture, general academic vocabulary, general agricultural vocabulary (here the glossary from O’Sullivan & Libbin (2011) can be used, as for others – the glossary from appendix 6 will be useful.

Do not teach only vocabulary – teach strategies of memorization, application, and meaning elicitation, connect the strategies with language communicative skills (reading, listening, speaking and writing). Teach cognitive strategies, such as classification and analysis, involve students in meta-cognitive analysis (discussing the strategies they apply) and socializing (sharing the strategies in the process of pair and group work, benefitting from each other’s professional knowledge, asking interlocutor for help in the process of communication).

List of publications related to the doctoral dissertation:

1. Tskhvitava, T. (2015). Some specificities of agriculture-related ESP teaching. 5th International Research Conference on Education, English language Teaching, English language and Literature in English (IRCEELT), p. 440-445
2. Kadagidze, L., Tskhvitava, T. (2015). Activities of teaching vocabulary through receptive and productive skills in agriculture ESP. *European Conference on Education and Applied Psychology (9th conference)*. Vienna, p. 12-19.
3. Tskhvitava, T. (2016). Vocabulary learning strategies of English for specific purposes students at Agricultural University of Georgia. *Journal of Education in Black Sea Region*, vol. 2, iss. 1, p. 130-141.
4. Tskhvitava, T. (2016). Topic, text and vocabulary selection for the unit structure in ESP agriculture course book. *European Journal of Education and Applied Psychology*, 1, p. 7-9.

