THE NECESSITY FOR DEVELOPMENT OF METACOGNITIVE SKILL AT TERTIARY INSTITUTIONS

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Abstract
The paper deals with basic language learning strategies to develop metacognitive awareness at tertiary institutions. Metacognitive awareness as central to students’ self-evaluation is described as the use of those cognitive skills or strategies that increase the probability of a desirable outcome. Successful adult learners employ a range of metacognitive skills and effective teachers of adults attend to the development of these skills. In the second part of the article the results of the research are presented in the field of learning strategies, their implementation in ESP environment. On the basis of the data collected from four universities of Lithuania the authors come to the conclusion that it is necessary to change the role of the teacher of ESP. Only having changed a teacher’s attitude towards the developing of metacognitive awareness, students will be given the opportunity to improve their metacognitive strategies.

KEY WORDS: metacognitive skills, tertiary institution.

Anotacija

PAGRINDINIAI ŽODŽIAI: metakognityvinių įgūdžių, aukštštiosiose mokyklose.

Introduction
How can English teachers accelerate the learning processes of their students? One way is to teach students how to learn more effectively and efficiently. Learning strategies are „procedures or techniques that learners can use to facilitate a learning task“ (Chamot, Barnhardt, El-Dinary, Robbins, 1999, p. 2). Learning strategies instruction can help students of English become better learners. In addition, skill in using learning strategies assists students in becoming independent, confident learners. Finally, students become more motivated as they begin to understand the relationship between their use of strategies and success in learning English.

For this reason the purpose of the research was to analyze a set of strategies used by students to find out their level of metacognitive awareness.

The object of the research was ESP learning strategies. The problem of the scientific paper is to prove that the change of a teacher’s role during ESP lectures is of ultimate importance in enhancing metacognitive skills.

1. Methodology
Metacognition can be defined simply as thinking about thinking. Learners who are metacognitively aware know what to do when they don't know what to do; that is, they have strategies for finding out or figuring out what they need to do. The use of metacognitive strategies ignites one's thinking and can lead to more profound learning and improved performance, especially among learners who are struggling. Understanding and controlling cognitive processes may be one of the most essential skills that classroom teachers can help second language learners develop. It is important that they teach their students metacognitive skills in addition to cognitive skills.

In education, the term 'metacognition' can be defined as „awareness of one's own knowledge or problem-solving abilities“. In an effort to enhance learners' metacognitive ability, a number of researchers have explored ways to induce learner reflection on instructional content and activities. Teachers can help students operate at a higher cognitive level and have a positive effect on student results by providing „prompts“, such as higher order questions, direct instruction and practice in thinking skills, and encouragement to reflect through discussion and „thinking aloud“ (Beeth, 1998).

Metacognition refers to the ability of learners to be aware of and monitor their learning processes (Peters 2000). Although related, cognition and metacognition differ: cognitive skills are those needed to perform a task whereas metacognitive skills are necessary to understand how it was performed (Rivers, 2001; Schraw, 1998). Metacognitive skills are generally divided into two types: self-assessment (the ability to assess one's own cognition) and self-management (the ability to manage one's further cognitive development) (Rivers, 2001). Successful adult learners employ a range of metacognitive skills and effective teachers of adults attend to the development of these skills.

Students need to develop an awareness of the learning processes and strategies that lead to success. This awareness of one's own thinking processes is termed metacognition or metacognitive awareness. Students who reflect on their own thinking are more likely to engage in metacognitive processes such as planning how to proceed with a learning task, monitoring their own performance on an ongoing basis, finding solutions to problems encountered, and evaluating themselves upon task completion. These metacognitive activities may be difficult for students accustomed to having a teacher who solves all their learning problems and is the sole judge of their progress. Teachers need to encourage students to rely more on themselves and less on the teacher.

The distinctions between cognitive and metacognitive strategies are important, partly because they give some indication of which strategies are the most crucial in determining the effectiveness of learning. It seems that metacognitive strategies, that allow students to plan, control, and evaluate their learning, have the most central role to play in this respect, rather than those that merely maximize interaction and input… Thus the ability to choose and evaluate one's strategies is of central importance
Metacognition combines various attended thinking and reflective processes. It can be divided into five primary components: (1) preparing and planning for learning, (2) selecting and using learning strategies, (3) monitoring strategy use, (4) orchestrating various strategies, and (5) evaluating strategy use and learning. Teachers should model strategies for learners to follow in all five areas, which are discussed below.

### 2. Research results

Several months ago a research was carried out in four universities of Lithuania: Vilnius Gediminas Technical University, University of Klaipėda, University of Šiauliai and Vytautas Magnus University. The research was carried out in the form of questionnaire and the aim of it was to find out what were the most popular techniques of acquiring the new vocabulary during ESP lectures. 338 students in total have filled in the questionnaire and the data have been processed using SPSS programme (version 11.0). In the research students of the first and the last year foreign language study of various non-linguistic specialities were involved. The questionnaire was made up of 34 questions and was based on the taxonomy created by Schmitt (1997). The Alpha coefficient (.884) confirms validity and statistically significant relationship between strategies. All the strategies were divided into 6 categories as suggested by Schmitt (1997).

In Table 2 it can be seen what are the categories of vocabulary acquisition strategies that are mostly used by Lithuanian students. The preference is given to discovery-determination (DISCOV-DET) category – 39.875%, which shows that in the process of learning new words students involve such strategies as use on monolingual/bilingual/electronic dictionaries, guess a meaning of a word from context, use word lists created by a teacher or publisher. The choice of this category confirms that students acquire new lexicon in a shallow way and they not cognitively mature. If it so they teachers introducing new vocabulary learning strategies should bear in mind students’ cognitive maturity.

<table>
<thead>
<tr>
<th>Strategy Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discovery social</td>
<td>7.66</td>
</tr>
<tr>
<td>Consolidation social</td>
<td>1.1933</td>
</tr>
<tr>
<td>Consolidation memory</td>
<td>15.13</td>
</tr>
<tr>
<td>Consolidation metacognitive</td>
<td>16.71429</td>
</tr>
<tr>
<td>Consolidation cognitive</td>
<td>23</td>
</tr>
<tr>
<td>Discovery determination</td>
<td>39.875</td>
</tr>
</tbody>
</table>

The least popular strategies are social ones (CONS-COS, DISCOV-SOC). That means that students tend not to collaborate to learn new lexicon. It could be due to the fact that vocabulary learning does not necessarily require social interaction, though the latter could be very useful while negotiating about the meaning of new words in and outside classroom. Nevertheless the results prove that it is rather rare.

The same results can be verified by Graphs 1 (1year students) and 2 (last year students), which show the most popular vocabulary learning strategies in the descending order. Several tendencies can be observed trying to compare the answers of the first and last year students. The great majority of the 1\textsuperscript{st} year learners seem to favour some form of mechanical strategy such as use an electronic dictionary more (1 year – 50.4%, 2 year – 66.7%), over deeper, more complex ones, such as contextual guessing or metacognitive strategies This finding is disappointing in the light of the Depth-of-Processing (DOP) hypothesis (Craik and Lockhart, 1972), which states that 'deeper' analysis of a stimulus (with 'depth' referring to a greater degree of semantic involvement) leads to better long-term memory retention. A general counterargument to the use of (bilingual, electronic) dictionaries is: word meaning is given away too easily (shallow processing), dictionary look-up may be crucial to vocabulary acquisition/retention. But there are some positive changes in students’ choice of vocabulary learning strategies as well. For example, many more students of the last year of study prefer to learn by pair work in class: (1 year – 4.6%, 2 year – 13.5%), by group work in class (1 year – 9.9%, 2 year – 17.9%), ask a teacher to estimate your knowledge (1 year 3.1%, 2 year – 15.9%), students ask a teacher for Lithuanian translation more (1 year – 8.4%, 2 year – 13%) they start learning new words using word lists made by a teacher or publisher (1 year – 20.6%, 2 year – 31.9%), their usage of monolingual dictionary increases quite significantly (1 year – 6.9%, 2 year – 17.4%). The given examples allow us to make assumptions that the older students become the more social, cognitive strategies they start to employ in the process of acquiring new words.
Figure 1. Students choice of strategies – first (1) year of studies
This can be illustrated by Fig. 3 in which vocabulary learning strategies are shown according to their categories and students’ year of study. It may be clearly seen that students of the last year of study use more consolidation-cognitive and consolidation-social strategies. This can be interpreted that for remembering a new word students do not ignore cooperation with fellow-students, they employ mental processes which directly contribute to language learning, for example, they do written repetition, keep a vocabulary notebook, do verbal repetition in both mother tongue and in English, etc. These all involve mental processes.

Table 3

Usage of vocabulary learning strategies according to the categories and year of study
Conclusions

This paper has attempted to synthesize the major findings of various areas of research into vocabulary learning and acquisition and to present them from the angle the current situation in Lithuania. These results provoke giving some recommendations to a teacher eager to help their students to acquire new lexicon more efficiently:

1. Metacognitive skills should be promoted by teachers.
2. Students should spend considerable time reading a variety of texts. Students should be taught strategies for learning word meanings independently as they read.
3. Using self-assessment (the ability to assess one's own cognition) and self-management (the ability to manage one's further cognitive development) increases the level of metacognition.
4. The teaching of metacognitive skills is a valuable use of instructional time for a second language teacher. When learners reflect upon their learning strategies, they become better prepared to make conscious decisions about what they can do to improve their learning. Strong metacognitive skills empower second language learners.

Finally, teachers should help students develop affective and social strategies, as well as intellectually related strategies, based on their individual learning styles, current strategy use, and specific goals.

Literatūra

METAKOGNITYVINIŲ ĮGŪDŽIŲ UGDYMO BŪTYNybĖ AUKŠTOSIOSE MOKYKLOSE

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Santrauka


Taigi nagrinėjančiajame meta-kognityvinių įgūdžių ugdymo empirinius tyrimus, pastebimas skirtumas tarp kognityvinių ir meta-kognityvinių žinių, kai autonomines svetimosios kalbos studijas kontroliuoja dėstytojas, leisdamas besimokantiesiems patiems valdyti mokymosi procesą ir savarankiškai įvertinti padarytą pažangą.


Atlikto tyrimo rezultatai leidžia teigti, kad pirmo kurso studentai dažniau taiko tas mokymosi strategijas, kurios labiau susijusios su įsiminimo technika, nei tas, kur būtina kritiškai įvertinti tam tikrą temą ar mokymosi vienetą. Atradimo, apibrėžtas ar konsojodijos metakognityvinės strategijos yra populiaresnės tarp vyresnių kursų studentų. Tai leidžia daryti įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvairius įvartį.