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O. M. VERKHOVTSOVA

*Senior Lecturer at the Department of Foreign Languages and Translation,
National Aviation University, Kyiv, Ukraine*

E-mail: olverks@gmail.com

<https://orcid.org/0000-0002-0446-190X>

O. V. KUTSENKO

*Senior Lecturer at the Department of Foreign Languages and Translation,
National Aviation University, Kyiv, Ukraine*

E-mail: helena_nau@com.ua

<https://orcid.org/0000-0002-4033-7025>

**THE IMPACT OF TASK COMPLEXITY ON THE LANGUAGE LEARNING PROCESS:
ANALYSIS OF IMPORTANT FACTORS**

The task of the modern university is to foster motivation for study so that students' aim was not simply to get a diploma or a certificate but gain fundamental knowledge and consider studies as self-development. For this it is important to provide students with adequate and understandable tasks—only in this case they will be fruitful. Motives are a structural component of any activity. Motivation is a process of encouraging to activity targeted at particular results. Successful studies are determined learners' developed motivation which in its turn requires knowledge and motivating aspects. Research of the impact of task complexity on the language learning is an important sphere of studies of language teaching. Task complexity deals with the level of difficulty of a certain task. This is a multifaceted notion which embraces various aspects of tasks, including their cognitive requirements, a number of stages or components involved, a degree of uncertainty or ambiguity and experience, necessary for its effective execution.

The article examines the dependence of students' motivation on the difficulty of the task and its influence on their academic success. The authors indicate various factors influencing the formation of motivation, such as ambitions, personal interests, and even the level of motivation of teachers. The research suggests different approaches to motivating students, including stimulating internal motivation, developing self-esteem, actively involving students in the learning process, and creating a favorable educational environment where students will receive not only knowledge, but also interpersonal communication skills, self-realization, and critical thinking development. The authors present the results of student surveys on the impact of task complexity on their motivation during learning.

Key words: task complexity, learning motivation, development of motivation, motives, motivating factors of learning.

An important condition for the formation of interest in educational activities is the opportunity to show students intellectual independence and initiative. For this, in the learning process, it is important to use questions and tasks that require students to actively search independently, to create problem situations, for the solution of which they still lack knowledge, which means that there is a need to acquire new ones.

The success of educational activities determines the development of students' motivation. The formation and development of positive learning motives is possible only by taking into account the motivating factors of learning. Interest in the content and process of learning arises and develops in the event that students can show academic independence and initiative in the conditions of active learning methods, posing problematic

questions, problem situations, performing tasks that are positive and surmountable. Student learning motivation, its development and sustainability also depend on the variety of methods and techniques of educational work, the organization of the learning process, the variety of use of educational material, various methods of visibility and technical teaching aids. The novelty of the educational material is also considered the most important prerequisite for the emergence of interest. Forming and developing students' learning motivation, the teacher provides a constant constructive mechanism of cognition.

The purpose of the article is to investigate how the complexity of tasks affects students' internal motivation to study, to consider how complex tasks can stimulate students to greater efforts and increase interest in the material being studied.

In the process of learning, motivation can change, and a number of factors affect it: the organization of the educational process in the educational institution; individual characteristics of the student; subjective characteristics of the teacher; specifics of the discipline. Curiosity, interest, desire to learn about something new. The desire to obtain a prestigious education in a prestigious university in order to use the diploma in the future when entering a job. Motives, which include the mechanism of action, arise under the influence of emotions. Student motivation is one of the most effective ways to improve the learning process at a university. Motives are the driving forces of the process of learning and mastering the material.

Research methods. To achieve the goal, the authors used structured surveys, questionnaires involving 60 students learning two foreign languages to collect data on their motivation before, during and after completing complex tasks. Statistical analysis of the obtained data was used to determine correlations between the level of difficulty of tasks and changes in students' motivation.

An important role in the success of educational activities belongs to the power of motivation and its structure as such. According to the Yerkes-Dodson law, formulated more than one hundred years ago, the effectiveness of activity depends on the strength of motivation, i.e., the stronger the urge to act, the higher the effectiveness of the activity. The Yerkes-Dodson law in psychology states that the best results are achieved with an average intensity of motivation [Yerkes R. M., Dodson J. D.]. There is a certain limit beyond which its further increase leads to the absorption of results. It is known that in order to carry out an activity, sufficient motivation is necessary. However, if the motivation is too strong, it increases the level of activity and tension, as a result of which certain disorders occur in the activity, then the work efficiency deteriorates. In this case, a high level of motivation causes unwanted emotional reactions (tension, excitement, stress, etc.), which leads to a decrease in activity. It has been experimentally established that there is a certain optimal (optimal level) of motivation at which the activity is performed best of all (for a given person, in a specific situation).

Task complexity has been an active area of research in foreign language learning in recent years, and researchers continue to explore the role

of task complexity in language teaching and learning. Peter Robinson has conducted extensive research on the effects of task complexity on language learning. Robinson presents a comprehensive overview of task-based language learning, including its theoretical foundations, key principles and practical applications. He argues that task-based language learning offers a more authentic and meaningful approach to language learning and that it can be used to promote both language acquisition and communicative competence [Robinson P]. Martin Bygate investigated the impact of task complexity on language learning, particularly in the context of task-based language learning. The scholar examines the concept of task framing, which refers to the way in which tasks can provide a context for students' interpretation and use of language. He argues that task formulation can influence how learners perceive and use language and this is an important aspect of task-based language learning [Bygate M]. Susan Gass in a chapter in the Cambridge Handbook of Second Language Learning that provides an overview of task-based language learning, focuses on the ways in which tasks can facilitate language learning and how they can be used to measure language proficiency. She also discusses the challenges and limitations of using tasks in language learning and suggests how to design effective language learning tasks [Gass S].

Task complexity refers to the level of complexity of a task or activity that language learners perform. The impact of task complexity on language learning has been investigated in a variety of contexts, including classroom and natural language learning environments. The use of modern technologies, methods and means of education, improvement of the methodology of conducting training classes is an integral part of the pedagogical activity of a specialist teacher. In this process, which is constantly being improved, educational tasks play an important role. The choice of certain educational tasks should be carried out by the teacher taking into account the cognitive interests and educational capabilities of the students. So, if the educational task is assessed as difficult, 83% of interviewed students experience a state of fear and anxiety. If the task is evaluated as easy, does not require effort, a decrease in cognitive interest is noted. 96% are most comfortable and attractive in tasks that are subjectively assessed as tasks of medium difficulty. In such tasks there is an opportunity to

realize oneself, therefore they arouse interest. It was revealed that if students have a need for achievement, they will be oriented towards choosing more complex educational tasks. One of the effective types of educational tasks in the aspect of formation and development of educational motivation are interactive tasks and interactive learning in general. Interactive learning is built on group interaction, cooperation, collaboration, when the learning process takes place in a group joint activity, while the teacher's activity becomes the place of student activity, and the teacher's task becomes the creation of conditions for the manifestation and implementation of their educational initiative. Interactive learning involves the formation of new experience followed by theoretical understanding. The experience and knowledge of the participants in the educational process serve as a source of their mutual learning. By sharing their knowledge and experience, the participants take on part of the teaching functions of the teacher, which increases their motivation and contributes to higher learning productivity. The main features of the interactive educational process are interpersonal, dialogic interaction in the "teacher-student" and "student-student" systems, work in small groups, active role-playing, game and training organization of learning, informational and educational environment. Interactive tasks include tasks performed in dialogue, in the process of group discussion, analysis of life and professional situations, "brainstorming", "round table", "case study", etc.; as well as educational tasks based on game methods: role-playing games, work and creative games, etc.

Our research has shown that task complexity can have both positive and negative effects on language learning. On the one hand, more difficult tasks can provide students with more opportunities to communicate with the language and develop their language skills. For example, tasks that require students to discuss meaning with a partner or complete a complex writing task can help them develop vocabulary, grammar and discourse skills. More challenging tasks stimulate students and encourage them to interact with the language, which can increase their motivation to learn. They make students analyze and synthesize information, which can improve their critical thinking and problem-solving skills. Challenging tasks

encourage students to use language in a meaningful way, which can improve their ability to remember and apply what they learn.

On the other hand, tasks that are too difficult can overwhelm students and hinder their language development, as well as lead to frustration or discouragement. If students cannot understand a task or cannot successfully complete it, they may become frustrated and lose motivation to learn. Difficult tasks often take longer to complete, which can be a problem for students with limited study time. Also, if the task is too difficult, students may focus more on completing the task rather than using the language to communicate. Students who struggle with challenging tasks may lose motivation and feel like they are not making progress.

It is important to consider the level of difficulty of the task when planning language learning activities and to ensure that the tasks are of appropriate difficulty for the students' level of knowledge and learning objectives. By measuring student workload, teachers can determine whether a task is too easy, too difficult, or appropriately challenging for students. This information can help teachers adjust their teaching methods and materials to better meet the needs of their students.

When teaching a new language, teachers should compose tasks in such a way that their complexity gradually increases. It's a good idea to start with simpler tasks that focus on basic vocabulary and grammar and gradually introduce more complex tasks that involve higher-order thinking skills such as critical analysis or creative expression. This allows students to gradually develop their language skills. The teacher can include tasks that reflect real-world language use. These tasks may include role-plays, simulations, debates, or problem-solving activities that require students to use language in meaningful contexts. Authentic tasks engage students in applying their language skills in practical situations, making the learning experience more relevant and motivating.

One way to implement task-based learning approaches is to focus language learning around meaningful tasks. These tasks can be targeted and require students to use the target language to achieve a specific goal. For example, students can work in groups to plan a vacation or create a presentation on a specific topic. Task-based learning promotes language acquisition through

active participation and problem solving. When tasks seem overwhelming because they are too large, 53% of respondents break the task into smaller, more manageable steps. This can make it easier to tackle one piece at a time. 30% take rest of postpone doing the task and 12% look for help. The teacher should adapt the difficulty of the tasks according to the students' abilities and provide support and help for the less experienced students, while giving the more advanced students more difficult tasks. This approach ensures that students are appropriately challenged and can progress at their own pace. The use of various multimedia resources and activities will increase the complexity of the task. This may include listening, speaking, reading and writing skills as well as visual and audio materials. Incorporating multiple modalities into language tasks provides students with a rich and comprehensive learning experience. The difficulty of the task is the criterion for assessing the language proficiency of those who are studying. Designing assessment tasks that match the complexity of learning tasks allows teachers to assess students' progress and identify areas for improvement based on their ability to complete increasingly complex language tasks.

The complexity of a language learning task can be measured in different ways, depending on the specific task and the objectives of the assessment. We distinguish linguistic, cognitive and communicative complexity. Language difficulty refers to the level of difficulty of the language used in the task. It can be measured by looking at factors such as lexicon, grammatical structures and discourse features. Cognitive complexity refers to the level of mental effort required to complete a task. This can be measured by factors such as the number of steps required to complete a task, the amount of information that needs to be processed. Communicative complexity refers to the level of communicative demands associated with task performance.

Measuring student task load can help teachers understand the cognitive load of a particular task. It refers to the amount of mental effort required to complete a task and can affect students' ability to process and retain new information. By understanding cognitive load, teachers can design tasks that are more effective for learning and do not overload students' working memory. When students are given tasks that are too easy or too

difficult, they can become bored or frustrated, which can negatively affect their motivation to learn. Measuring task load can help teachers design tasks that are appropriately challenging and interesting, which can increase student motivation to learn.

Measuring workload can ultimately lead to better learning outcomes for students. When tasks are appropriately challenging, students are more likely to engage with the material, develop their skills, and retain information. By measuring task load, teachers can design tasks that are more effective for learning and that ultimately lead to better outcomes.

Understanding the complexity of the task is important for several reasons. It helps to determine the level of experience or skill required to successfully perform the task, estimate the time and resources required, and develop appropriate training strategies or programs. In addition, recognizing task complexity can help with workload management, task assignment, and resource allocation.

In conclusion, we note that the motivation of students to study is directly related to the motivation of teachers, their ability to build pedagogical communication with students on a democratic basis and use innovative technologies for conducting classes in combination with deep knowledge of the taught discipline. Easy tasks and questions that do not require mental tension are not interesting, but the difficulties must also be strong, overwhelming, otherwise interest in them will also disappear.

Another condition is that the educational material must be diverse, which gives an opportunity to look at the subject of study from different angles. It should contain new information for students, and at the same time, previously acquired knowledge will be useful for its development. In a word, student motivation is heterogeneous, its formation and analysis is a difficult task. For its development during the educational process, it is necessary to use motivating factors.

Thus, task complexity can be beneficial for language learners if the tasks are appropriately challenging and well suited to the learners' abilities. It is important to find a balance between challenging tasks and not overwhelming students, especially for beginners. It is a crucial factor that affects the cognitive demands and level of difficulty of a task, requiring people to apply higher-order thinking skills and expertise to perform the task effectively.

REFERENCES

1. Bygate, M. (2018). Tasks as a context for the framing, reframing and unframing of language (pp. 25–40). Amsterdam, The Netherlands : John Benjamins Publishing Company.
2. Gass, S. (2013). Tasks in second language learning. In J.Herschensohn, & M.Young-Scholten, (Eds.). *The Cambridge handbook of second language acquisition* (pp. 189–206). Great Britain : Cambridge University Press.
3. Robinson, P. (2003). Task-based language learning and teaching. In C.Doughty, & M. Long, (Eds.). *The handbook of second language acquisition* (pp. 527–554). Great Britain : Cambridge University Press.
4. Yerkes R. Dodson J. D. (1908). The relation of strength of stimulus to rapidity of habit-formation. *Journal of comparative neurology and psychology*, 18, 459–482. <https://doi.org/10.1002/cne.920180503>

О. М. ВЕРХОВЦОВА

старший викладач кафедри іноземних мов та перекладу,
Національний авіаційний університет, м. Київ, Україна
Електронна адреса: olverks@gmail.com
<https://orcid.org/0000-0002-0446-190X>

О. В. КУЦЕНКО

старший викладач кафедри іноземних мов та перекладу,
Національний авіаційний університет, м. Київ, Україна
Електронна адреса: helena_nau@com.ua
<https://orcid.org/0000-0002-4033-7025>

ВПЛИВ СКЛАДНОСТІ ЗАВДАНЬ НА ПРОЦЕС ВИВЧЕННЯ МОВИ: АНАЛІЗ ВАЖЛИВИХ ФАКТОРІВ

Завдання сучасного університету – виховувати мотивацію до навчання, щоб метою студентів було не просто отримати диплом чи сертифікат, а отримати фундаментальні знання та розглядати навчання як саморозвиток. Для цього перед учнями під час навчальної діяльності важливо ставити адекватні та зрозумілі для них завдання – тоді вони набудуть значущості. Мотиви є структурним компонентом будь-якого виду діяльності. Мотивація – процес спонування до діяльності, спрямований досягнення певних цілей. Успішність навчальної діяльності визначається розвиненістю мотивації студентів, що, в свою чергу, передбачає знання та врахування мотивуючих чинників. Дослідження впливу складності завдання на вивчення мови є важливою сферою досліджень у галузі вивчення іноземної мови. Складність завдання стосується рівня складності, пов'язаного з певним завданням. Це багатовимірне поняття, яке охоплює різні аспекти завдання, включаючи його когнітивні вимоги, кількість залучених етапів або компонентів, ступінь невизначеності або двозначності та рівень досвіду, необхідний для його ефективного виконання. У статті розглядається залежність мотивації студентів від складності завдання та її вплив на їх успіхи у навчанні. Автори позначають різні чинники, що впливають формування мотивації, такі як амбіції, особисті інтереси, і навіть рівень мотивації викладачів. У дослідженні пропонуються різні підходи до мотивації студентів, включаючи стимулювання внутрішньої мотивації, розвиток самоповаги, активне залучення студентів до навчального процесу та створення сприятливого освітнього середовища, де студенти отримуватимуть не лише знання, а й навички міжособистісного спілкування, самореалізації та розвитку критичного мислення. Автори надають результати опитувань студентів щодо впливу складності завдань на їх мотивацію під час вивчення мови.

Ключові слова: складність завдання, навчальна мотивація, розвиток мотивації, мотиви, мотиваційні фактори навчання.