

в) учащиеся получают возможность изучать материал в удобном для них темпе. Многие студенты просто не успевают и не могут понять материал с первого раза. С помощью видеолекций они могут посмотреть объяснение материала столько раз, сколько им понадобится;

г) снижается тревожность. Многие студенты стесняются попросить еще раз объяснить преподавателя непонятные моменты, опасаясь насмешек одноклассников.

Основное отличие видеолекций от обычных в том, что в них отсутствует контролирующая и консультационная функция. Поэтому при организации дистанционного обучения для контроля усвоения учебного материала в курс включаются тесты, опросы. А для консультирования и общения используются коммуникативные средства СДО: вебинары, форумы, чаты.

Видеоурок можно создать в программе iSpring Presenter 7, которая устанавливается как надстройка для PowerPoint. Помимо видеосопровождения можно добавить к урокам YouTube – видео, Flash-ролики и тесты для проверки знаний учащихся. С iSpring Presenter 7 можно сохранить видеолекцию для последующего размещения: на сайте или в блоге; на CD/DVD.

Таким образом, использование выделенных приемов будет способствовать повышению интереса у студентов с невысокими результатами учебной деятельности к изучаемому материалу, а также поможет усвоить информацию достаточно большого объема и сделать ее более понятной и запоминающейся.

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## THE POTENTIAL OF MULTIMODAL SCAFFOLDING IN TEACHING PROFESSIONAL FOREIGN LANGUAGE COMMUNICATION

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It is traditionally assumed that the main form of presenting didactic material is the text, that is the language mode, though there are other methods that can be effectively used for communication. Images, gestures and actions in education are traditionally considered only as illustrative support for written or oral speech. However, it should be recognized that communication is multimodal and all strategies of conveying the meaning of a message should be represented. Modality is a physical way of perceiving information through specific sensory organs. Accordingly, in a multimodal way of processing incoming information a person decodes external signals using different modalities simultaneously. Leading educators call for a wider application of the so-called multimodal teaching aids in educational process including multimodal texts that can be effectively combined with traditional oral and written ones [1].

Although the development of multimodal literacy is closely linked to the growth of digital communication technologies, the word Multimodal is not synonymous with Digital. Multimodal texts can be printed, such as books, comics, and posters or digital, ranging

from slides, digital narratives, e-books, vlogs, web pages, and social media to animation, films, and video games. Live multimodal texts include dance, performance, oral histories, and presentations.

We use elements of multimodal communication in English language teaching at the Belarusian State University of Informatics. This pedagogical strategy fits perfectly with the concepts of Blended and Mobile Learning. For example, when covering the topic “Artificial Intelligence” students prepare presentations with multimodal texts and create the so-called digital narrative from the perspective of a AI housewife or robot teacher designing multimodal websites.

A particularly interesting assignment for students was to create a test in which they had to insert images of computer peripherals into sentences instead of words using Drag-and-Drop function. These types of tasks help develop productive verbal skills, establish interdisciplinary connections, and facilitate the creation of collaborative educational products. They seem to be especially effective with beginners giving them the benefits of the so called Multimodal Scaffolding.

Scaffolding is a strategy that enables a student to solve a problem, perform a task, or achieve a goal that would be beyond their capabilities without assistance. First, a teacher engages a student in solving a problem. In other words, they create a special space in which a student will be directed toward solving this specific problem.

Then, the degrees of freedom are reduced as the teacher continually helps students maintain the desired outcome guiding them to the desired result with an ideal goal of ultimately independent completion. Responding flexibly to the student's actions means providing hints or performing part of the action for the student if they make a mistake. So it is a temporary support, a kind of a functional system maintained by a student and a teacher. Instructors gradually remove the support or the scaffolds, being ready to constantly reinforce them if necessary and responsibility is transferred to the student.

In the context of multimodal learning scaffolding is support using different types of modality. As the essence of scaffolding is to explain something in different ways, multimodality can be considered one of the methods of scaffolding [2].

The use of multimodality as scaffolding allows students to access and understand the given problem situations, complex ideas and expected outcomes in multiple ways using graphs, pictures, infographics, mindmaps and videos. The ultimate goal is to show the subject of discussion from different angles to make it easier for students to understand the idea correctly. It improves comprehension of abstract notions and matches individual learning styles such as visual (relying on sight), auditory (relying on hearing), kinesthetic (relying on movement and physical sensations), and logical/discrete (relying on logic and structure) [3].

It provides a comfortable learning environment, frustration is prevented and the student feels successful. Thus, multimodal scaffolding is proposed for academic purposes, based on the assumption that learners can better understand material when the material is presented in various modalities. Engaging different senses stimulates learners interest and memory.

If students are expected to perceive and create multimodal texts, it is logical to assume that a skilled reader of such texts is also likely to be an effective producer of them. Therefore, teaching educators the principles of multimodal literacy becomes imperative.

This includes:

- understanding the semiotic function of each mode;
- learning how to orchestrate multiple modes into coherent meaning;
- applying multimodal strategies in lesson planning, assessment, and feedback.

The complexity of creating such texts increases with the number of modes involved and the interactions between them. More sophisticated digital multimodal products include webpages, podcasts, interactive e-books, branching stories, animations, and short films. Educators must develop skills not only in designing such resources but also in evaluating and guiding students in their creation [4].

Work organized in this way can significantly increase the effectiveness of educational activities, the development of students' communicative competence, and is aimed at implementing the principle of individualization of learning.

The integration of multimodal approaches in education transforms the traditional linear model of knowledge transmission. It supports constructivist learning environments, encourages student-centered learning, and contributes to the individualization and personalization of educational trajectories.

Organizing learning activities around multimodal texts and scaffolding not only increases engagement and comprehension but also prepares students for modern digital realities, where communication is increasingly multimodal by nature. In this context, multimodal literacy becomes an essential component of both language education and general academic competence in the 21st century.

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## **МЕТОДИЧЕСКОЕ ОБЕСПЕЧЕНИЕ ПОДГОТОВКИ ПЕРВОКУРСНИКОВ К ИЗУЧЕНИЮ МАТЕМАТИКИ В ТЕХНИЧЕСКОМ ВУЗЕ**

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Математика является одной из первых дисциплин естественно-научного цикла, с которым вчерашний школьник встречается в техническом университете. Практика показывает, что большинство вузовских дисциплин, изучаемых на первых курсах, усваивается намного легче, чем математика, изучение которой занимает значительную часть времени у студентов первого курса.

Не секрет, что существует прямая зависимость между уровнем и качеством довузовской подготовки студентов и успешностью их учебы в высшей школе. Исследования, проведенные нами, свидетельствуют о том, что уровень довузовской подготовки первокурсников в большинстве случаев не соответствует отметкам аттестата о среднем образовании и результатам централизованного тестирования. Низкий уровень знаний математики за курс средней школы, адаптационные трудности, связанные с существенными изменениями условий и методики обучения, объема и содержания учебного материала являются причиной отсева многих первокурсников уже после первого семестра учебы в вузе. В связи с этим исключительно важно научить студента-первокурсника не растерять школьные умения и навыки, самостоятельно