

Білім беру саласында біз баланың ешбір кедергісіз білім алуына көмек береміз, бірақта баланың психологиялық денсаулығы оның психикалық күйіне психологиялық қолдау көрсету керек. Әрбір қиындықты шешетін құрал болса, арт-терапия ішкі қиындықтарды шешуге көмектесетін «алтын құрал» десе артық емес. Бала өмірінде қиял маңызды процесс. Қиял арқылы бала ойлап, қиялдап қана қоймайды, өз болашағын, арманың, бағындырар белестерін анықтайды. Қиял - бұл қанат секілді. Баланың қанатының қаққаның қаласаңыз, дер кезінде қиындықтарына мән беріңіз.

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THE FLIPPED CLASSROOM AS AN EFFECTIVE TECHNOLOGY OF HIGH SCHOOL STUDENTS' FOREIGN LANGUAGE SKILLS IMPROVEMENT

With the introduction of the updated content of education in Kazakhstan, more and more attention is paid to personality-oriented learning, which, in turn, requires the development of independent and critical thinking skills of students. One of the most effective ways to implement personality-oriented learning and meet these requirements is the "flipped classroom" technology.

This model was first used in practice by American high school teachers Jonathan Bergmann and Aaron Sams in 2000[1]. The introduction of this model possessed the absence of students in the classroom; to compensate the lessons in which students were absent, teachers began to record videos of their lessons. Soon, they realized that if all students were able to watch the lessons at home, in libraries, in places with a computer and Internet access; then they did not need to explain the educational material at school. Thus the "flipped classroom" technology was born. Lessons in the school were henceforth intended for practicing the material studied at home, discussing and completing tasks with the teacher. We should mention that the theoretical basis of this model was created in the year when Alison King published her book "From Sage on the Stage to Guide on the Side" in which she focused on the importance of the use of class time for the construction of meaning rather than information transmission [2]. Due to the fact that this model of learning is relatively new, scientists give different definitions of this term and also consider it in different ways. According to J. Bergmann and A. Sams, flipped classroom technology is a teaching technique where "what was usually done in classroom, under these conditions is performed at home, and what was previously done at home is now performed in the classroom"[1]. Professor R. Tolbert defined flipped classroom concept as a pedagogical approach when first contact with new material is shifted from group educational space to personal space in the form of structured assignments, and as a result, group space is transformed into a dynamic, interactive educational environment where leader guides students as they apply acquired knowledge and involves them in an active educational process[3]. In some scientific works flipped classroom technology is defined as a learning strategy [4]; the blended learning model [5] and approach [6]. However, all definitions have one thing in common: "a flipped classroom is defined as a pedagogical model in which work in the classroom and at home are reversed."

Modern education requires more and more new approaches to learning, and traditional learning is being replaced by the most effective technologies that have more advantages in teaching students. During the coronavirus pandemic, the term "distance learning" became more relevant than ever before, which allowed teachers and students from all over the world to use information and digital technologies in teaching. In this report, we would like to share our experience of using the "flipped classroom" model in distance learning and offer a new look at this concept. According to the generally accepted concept, "flipped classroom" is supposed to mean working in the classroom and getting acquainted with the educational material outside of it

[7], [8], [9]. From my own experience, I consider a flipped classroom as a blended learning model that does not require lessons in school, that is, the implementation of this model may occur online. The analysis and the study of the essence of the concept of "flipped classroom" allowed us to give the following definition of this concept: "The flipped classroom is a model of blended learning, focused on increasing student engagement by independent understanding and mastering the material being studied with the teacher's guiding and advising function."

There are a number of advantages of this model:

1. Time productivity and flexibility; if in the traditional classroom most of the time is spent on presentation and less time on practice, this model requires students and teachers to spend more time on practice. Students are in control of their own progress and move at their own pace;

2. The opportunity for students to discuss questions relevant for them; since the video is viewed at home, students have more opportunities to discuss the difficult questions that have arisen on the video of the lesson. Moreover, in the process of discussing these questions with the teacher and other students, students get profound knowledge on a particular topic;

3. Independence; within the framework of this model, high school students have the opportunity to study and analyze new material independently, thereby developing their critical thinking and meeting the requirements of personality-oriented learning;

4. Since this technology involves independent study of the main content of the educational material, students who were absent from the lessons can view the material, relying on the with detailed information necessary for completing the tasks;

5. This technology is based on the taxonomy of B. Bloom [10], and assumes familiarization with the content of the material at home, whereas discussion, analysis, synthesis and application is conducted in the classroom and which positively affects the emotional state of students.

There are some difficulties in implementing the "flipped classroom" technology:

1. Lack of motivation; teachers will have a hard time motivating students who are used to the traditional learning format;

2. The need for additional time for the "so busy" teacher to organize and adapt students to work within the framework of this technology;

3. Technical problems; working within the framework of this technology requires full access of students to a personal computer and Internet;

The successful implementation of the "flipped classroom" technology at foreign language lessons is possible if the following conditions are met:

1. Correspondence of the level of knowledge of the English language of students educational standards;

2. Proficiency, methodological literacy and information culture of the teacher;

3. Availability and quality of the information as well as the functionality of communication technologies.

In order to justify the advantages of using the technology of "flipped classroom" for the development of students' independence, a practical part of our research is offered. Before implementing this technology, students were introduced to the structure, content, requirements and rules of work. Then the first survey of high school students was conducted to determine the problems they face during the traditional format of education and to assess the level of independence. The questions in the questionnaire were as follows:

1. How do you rate your independence in a percentage?

2. How well can you work independently?

3. Do you have any problems with the traditional learning format?

4. Do you experience difficulties and stress while doing homework? Do you have any questions while doing your homework?

5. How well do you understand the material presented in the video format?

According to the results of the initial survey (table 1), the students noted a low level of independence and inability to do such work, when asked about the problems they often face, the students noted the lack of time for understanding and practice, noise and lack of concentration in the classroom, the inability to "get ahead" with excellent mastery of the material and the dependence of the overall class work on the other students. Also, most of the students said that they experience problems with homework and sometimes a depressed emotional state and fear. The students also pointed out that they sometimes forget some elements of the new educational material, which, in turn, prevent them to successfully cope with the tasks. The last question of the questionnaire, almost all students answered positively, referring to various video tutorials on English in social networks, which they remember and understand faster.

Question 1: How do you rate your independence in a percentage?

Question 2: How well can you work independently?

Question 3: Do you have any problems with the traditional learning format?

Question 4: Do you experience difficulties and stress while doing homework? Do you have any questions while doing your homework?

Question 5: How well do you understand the material presented in the video format?

Table 1

| Number of students asked | 1 st question | 2 nd question | 3 rd question | 4 th question | 5 th question |
|--------------------------|--------------------------|--|--------------------------|--|--|
| 37 | 15% - the average rate | 83% - not well 8% - well 9% - can't answer | 89% - yes 11% - no | 93% - yes, often 5% - no 2% - always different | 90% - understands better 8% - doesn't watch often 2% - understands badly |

The "flipped classroom" technology was tested in the educational process of 8th grade students on the topic: "Environmental problems". Students were previously sent a list of words for self-study, and were also offered tasks on the content of the video material they saw:

1. What environmental problems do people face worldwide?
2. What cause "global warming"?
3. How is the problem being dealt with in our country and in America?

Further discussion of this topic was carried out in the classroom.

After the introduction and practicing the "flipped classroom" technology, another survey was conducted to identify the students' attitude to this model and the changes that occurred with the implementation. Thus, according to the results of the second survey, the students rated their independent work higher than before, and noted the absence of questions when completing tasks, since their work is directed by the teacher, and the students noted the longer time allotted for practice, which allowed them to assimilate the material better. At the same time, we would like to note the increased activity of students in the classroom and the improvement in academic performance at the end of the quarter. The results of the survey after introduction and practicing "flipped classroom" technology are shown in the table 2.

Question 1: How do you rate your independence in a percentage?

Question 2: How well can you work independently?

Question 4: Do you experience difficulties and stress while doing homework? Do you have any questions while doing your homework?

Table 2

| Number of students asked | 1 st question | 2 nd question | 3 rd question | 4 th question | 5 th question |
|--------------------------|--------------------------|---|--------------------------|---|--------------------------|
| 37 | 67% - the average rate | 78% - well 18% - not well 4% - can't answer | - | 89% of students answered that they don't have problems with the homework anymore. | - |

Thus, the practical application of the "flipped classroom" technology in the form of an experiment showed the effectiveness of its use and its role in the development of students' independence.

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РАЗРАБОТКА ПРОГРАММИРОВАННОГО ТРЕНАЖЕРА ПО НЕОРГАНИЧЕСКОЙ ХИМИИ И ИССЛЕДОВАНИЕ ЕГО ЭФФЕКТИВНОСТИ

«Учиться надо всю жизнь, до последнего дыхания!»

Сюнь-цзы

Ежедневно мы замечаем изменения в нашем современном мире. Многие люди, предприятия, организации, в том числе и система образования, следует информационному прогрессу. Со временем все отрасли осваивают переход на автоматизированный процесс организации деятельности.

Знакомство с новыми научно-техническими технологиями и применение их в процессе обучения новым знаниям становится отличительной чертой развития современного общества.

Образовательный процесс не исключение. Процесс обучения ежедневно обновляется и образует огромный поток информации. Также меняется и отношение к результату образовательной деятельности: нужен человек, который способен самостоятельно организовать образовательную деятельность, применяя при этом различные творческие и управленческие подходы.

В настоящее время до сих пор применяется устаревшее методы обучения в педагогических системах. Свою несостоятельность показал традиционная система обучения еще в 60-е годы XX века и уже тогда начали поиск альтернативных систем обучения.

В психолого-педагогических исследованиях традиционная классно-урочная система обучения является самой простой и надежной в системе образования. На самом деле она считается плохо управляемой и минимально эффективной с точки зрения всестороннего развития личности учеников. Программированное обучение, изобретенное и разработанное в 50-60-е годы XX-го столетия, может быть ценным дидактическим средством при преподавании любых предметов. Особенно перспективным приёмом программированное обучение стало с широким распространением персональных компьютеров. Целью данной работы была разработка контента и интерфейса программного тренажёра по химии для школьников. Система задумана для изучения школьного курса химии самостоятельно или под руководством преподавателя.

За основу контента компьютерного тренажёра был принят классический учебник Нентвига И. и соавт. «Химический тренажёр: Программированное пособие для средней школы», изданный на русском языке в 1986г. Содержание учебника в целом соответствует современной школьной программе. Анализ структуры заданий позволяет установить, что в подходе Нентвига сочетаются линейный и разветвленный алгоритмы. Это позволяет добиться адаптивности материала и получения индивидуальных траекторий каждым из обучающихся. Вместе с тем, разнообразие типов заданий