HUB PILOTING

Aripova Elena Azizovna
Pre-Graduate Course Leader, English Teacher
Westminster International University in Tashkent
E-mail: earipova@wiut.uz

ABSTRACT

The article discusses the implementation of the SMART learning platform, which affects student performance in the context of online learning, using the example of WIUT Pre-university Course.

***Keywords**: Cloud solutions, performance, benefits, platforms.*

АННОТАЦИЯ

В статье обсуждается внедрение обучающей платформы SMART, влияющая на успеваемость студентов в контексте онлайн-обучения на примере курса Доуниверситетской подготовки МВУТ.

***Ключевые слова:** Облачные решения, успеваемость, преимущества, платформы.*

INTRODUCTION

Further discussion is based on consideration of the implementation of SMARTEST to reach schools and university, and lyceums in Uzbekistan, where SMARTEST was used as a developed digital platform. The data was collected by using a questionnaire disseminated among students of level 1 and 2. The article has a statistical analysis, a case study and some recommendations on further implementation.

LITERATURE REVIEW

The term "cloud computing" or "electronic hub" has been more popular in the recent few of years. A relatively recent trend in IT industry growth, this one is centered on consumers and driven by the rising usage of mobile devices such as laptops, tablet PCs, and smartphones as well as other forms of mobile computing. As a result of recent research, it has been identified as one of the digital economy's fastest-growing areas. By 2020, governments and business in Europe had spent a total of 45 billion euros in the advancement of cloud computing. Whenever a user requests anything from a cloud computing network, the servers, storage systems (data centers and server farms), and other resources are made available. As a metaphor for the Internet, the term "cloud" is used to describe a situation in which it does not matter

where the hardware and software resources that are being utilized are physically located. Cloud computing is a new business model as well as a new technical platform for creating and deploying applications. It also represents a new and more affordable method for end-users to access and utilize information technology (Bronzin, 2009). As a result of the fact that all data and apps are stored someplace on the Internet, cloud computing provides a number of benefits as well as some drawbacks. In addition to schooling, it may be employed in a variety of other tasks that occur in daily life. Along with granting access (usually at no cost) to many applications and services in the cloud that can be used in both formal and informal education, cloud computing allows for greater flexibility and mobility in the use of resources for teaching and learning, as well as a greater degree of collaboration, communication, and sharing of resources. Cloud computing can also be used to create a personalized learning environment or virtual communities of learners and teachers (Krelja, Rako and Tomljanovic, 2021).

DISCUSSION

The transition from high school to university study has always been challenging. The growth of courses with the use of new online resources is required by the Uzbek government's development plan for 2019-2023 in order to expand access to higher education in the country. The major contribution to this project is carried out by launching a new service (Digital Educational Hub) that will provide easy navigation on STEM themes and associated content in the future.

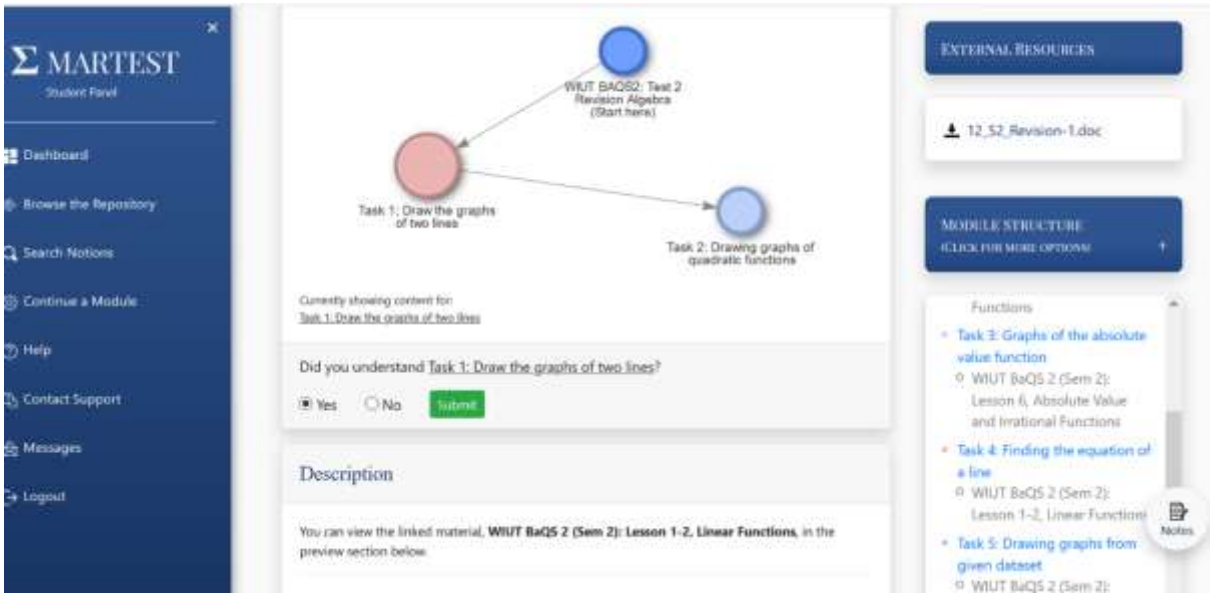
The level of engagement in higher education in Uzbekistan is low, with women and persons from rural regions in particular suffering from low levels of involvement (World Bank Report 2018). Those seeking a higher education may take use of a variety of online educational venues. The problem is that none of them provide the specific information that our initiative will provide, which will bridge the gap between pre-university and university STEM education. As a result, our digital educational center will make a significant contribution to promoting equitable and inclusive quality education in Uzbekistan. Teachers will be able to develop transitional topic information in a variety of forms with the help of a customizable software solution. Users will be able to choose appropriate learning routes that are tailored to their own learning styles as a result of this. More than that, topic information will be organized at the conceptual level, allowing users to study fields in greater depth, bringing them closer to the level of university education. Finally, the instructional material will be tailored to the users' cultural identities, which will be taken into consideration.

As part of the EduHub project, which is a Global Challenges Research Funding Project supported by Research UK, a digital platform has been already established, which is called SMARTEST.

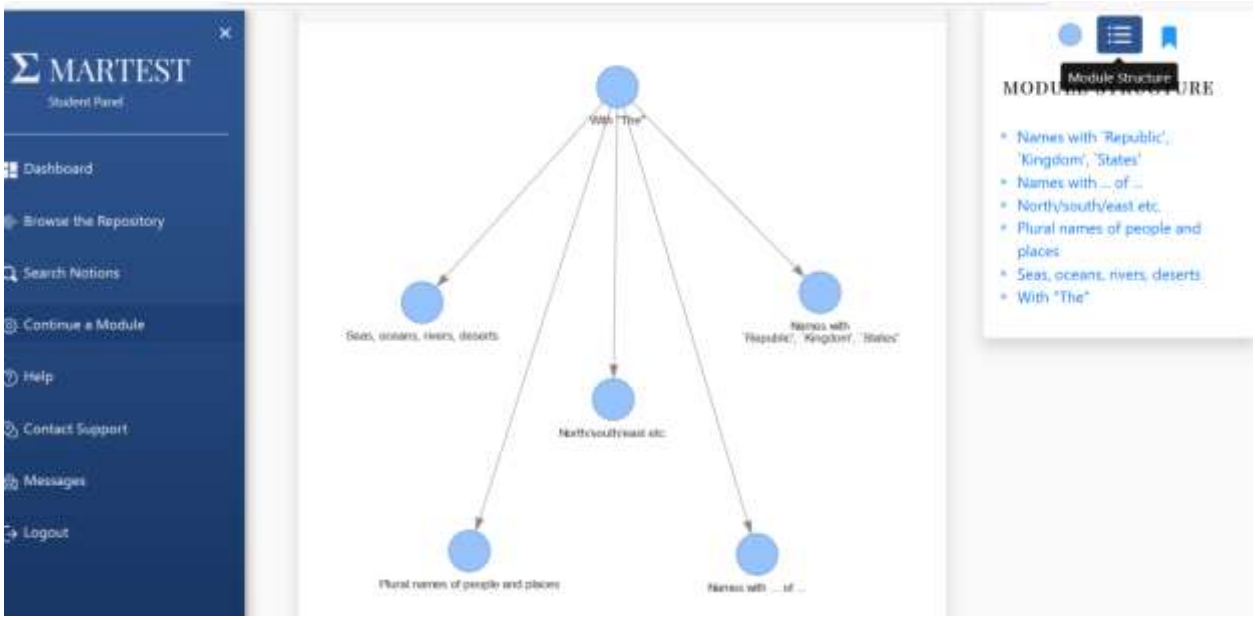
EduHub was completely functional within the first year of the project, and it was made available to our partners at Westminster International University in Tashkent in a working stable version after it had been created, deployed, tested, and assessed during that time period. At this point, the development team carried out the adjustments and updates suggested by the partners, which resulted in a considerable improvement in the functionality and user interface of the platform necessary for the project. Gaining access to the site may be accomplished by visiting https://smartestknowledge.org.

A variety of instructional resources have been generated and disseminated by the project partners, and appropriate educational materials have been created in the platform to supplement the existing materials on the subject. A system of graphs for several modules, such as in English and mathematics, is included in this set of materials. For example, the system is made up of a graphical core of modules and 12 substructures for each training module, as shown in the diagram below. The fundamental visual framework is developed to link all of the resources, allowing students to explore the system with relative ease. It is possible to get a general picture of the structure of module B by looking at this graph. The module structure is also shown in a more typical table of contents format when the student view option is activated (called module structure). Training resources are included inside each node (12 nodes). A set of unique tags has also been assigned to the nodes, which will allow users to search for module contents on the SMARTEST website more quickly and efficiently. Each test node layout provides files containing resources for independent work that may be used in conjunction with one another. All nodes are customizable, allowing instructors to augment them with whatever additional information they see relevant via the use of the teacher panel. Without even glancing at the descriptions of the nodes, such a style should provide students with an understanding of the fundamentals of the theory of a certain issue. The technology provides you with the ability to add any extra information to themed charts.

Picture 1

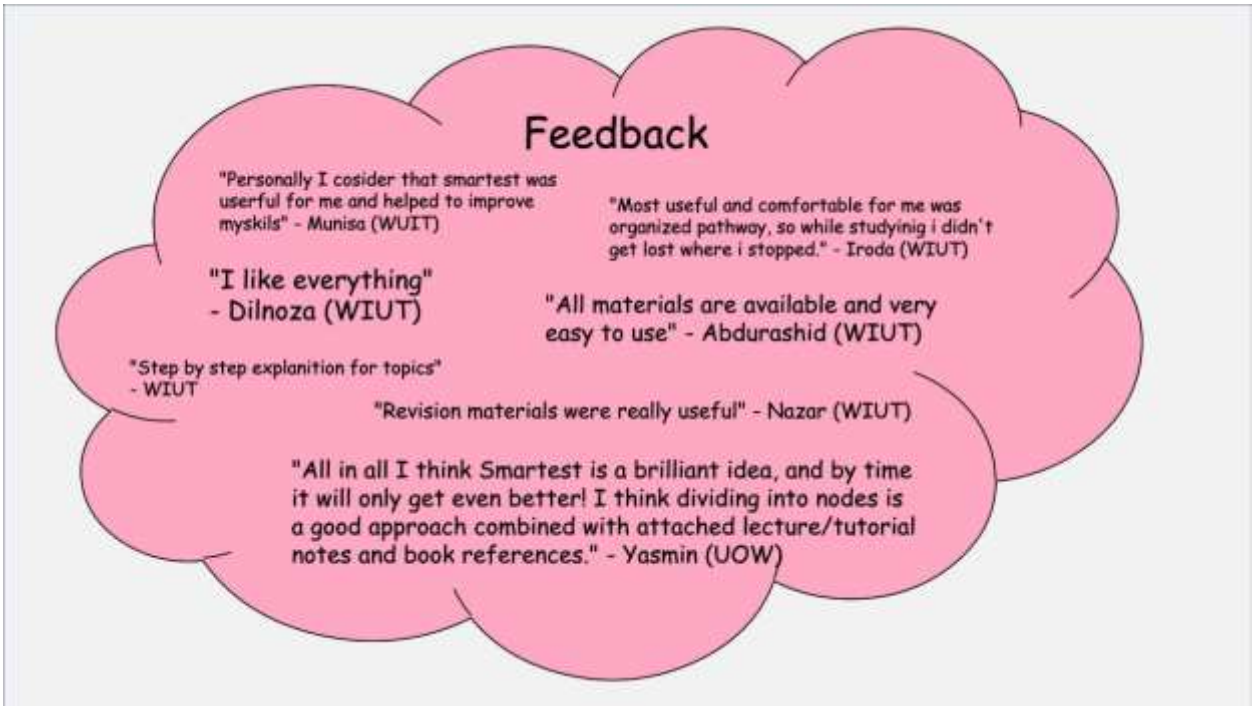


Picture 2



As can be seen from the provided picture Pre-university students were using all the uploaded materials either for self-study or for the revision before all final exams were held. The provided questionnaire revealed mostly positive feedback, which can be seen below (Bolotov, 2021):

Picture 3



By the second semester of the 2020/2021 academic year, WIUT Pre-University course will have improved training materials that will be accessible for use in the Pre-University course. It is our hope that this trial scheme, which has been tailored for WIUT students, would enable us to watch students' behavior and gather their input in order to make suitable improvements and corrections to the platform as needed. There are also parts dedicated to the ALWIUT, where all of the resources necessary for studying for the IELTS test will be made accessible. There has also been the development of a part including ready-made presentations and homework for students in the 10th and 11th grades of schools, as well as methodological instructions for instructors.

RESULTS

Students enrolled in BEAP (1&2 levels), BAQS (1&2 levels), and Maths for Computing have access to the Smartest platform for independent study reasons, according to the information supplied. The information reveals which particular learning resources were accessible, as well as the identities of the students who participated and the extent to which the learning materials were studied. Overall, students enrolled in Maths for Computing (52) had the most interest in the learning platform, followed by students enrolled in BAQS (26) and BEAP (16).

The Introduction to Module and Week 1 of Maths for Computing had the greatest levels of engagement activity, with average completion rates of 18 percent and 46 percent, respectively. It is worth noting that just three students completed all

of the Week 1 materials, whilst the remaining students' completion rates ranged from 15 percent to 85 percent. Starting in Week 6, the number of students dropped precipitously, with just eight students using the platform with around 20% of the content completed.

BAQS students showed the most engagement in BAQS 2: Test 2 Revision- Algebra and BAQS 2: Test 2 Revision- Geometry, with a total of 20 students in each course and 14 students in the other. At the start of Semester 2, four students finished Lesson 1-2: Linear Functions at an 8 percent completion rate, and just one student completed it at a 70 percent completion rate. It is clear that by the middle of Semester 2, the students' access rate had dropped dramatically, and the percentage had dropped to a very low level.

In the statistics for BEAP, which is the only module to have the lowest number of students using the platform, there is still another negative trend that can be seen. Despite the small number of students, it should be noted that BEAP 2 students were able to finish specific modules at a 100 percent completion rate. BEAP1 students, on the other hand, were not frequent users of the platform, and their interest in it began to wane at the beginning of the second semester.

The performance and completeness rates for Math for Computing were the greatest when all three modules were considered together, although BEAP and BAQS were only marginally lower when taken individually.

Case Study of SMARTEST at Pre-university of WIUT

Prior to delving more into the topic of assessment in the Basics of English for Academic Purposes of level 2 module, it is essential to understand the distinction between the two forms of evaluation that are discussed below: formative and summative assessment. Formative assessment is well-known for assisting students in reaching a certain level of achievement in their study. Summative assessment, on the other hand, is a method for determining what pupils have accomplished throughout the course of a course. As a result, it is quite difficult to employ just one of the kinds in teaching practice since they are both equally significant and extensively used. According to Cohen (2004), "the difference between assessment to meet the requirements of society ('summative' assessment) and assessment to assist in both teaching and learning ('formative assessment') is important. ". If a student has mastered the subject and is competent of continuing their education, summative evaluation is used to certify that they have completed the course. In contrast, formative assessment occurs throughout the course and is valuable in informing students about their progress in learning as well as the instructor about the

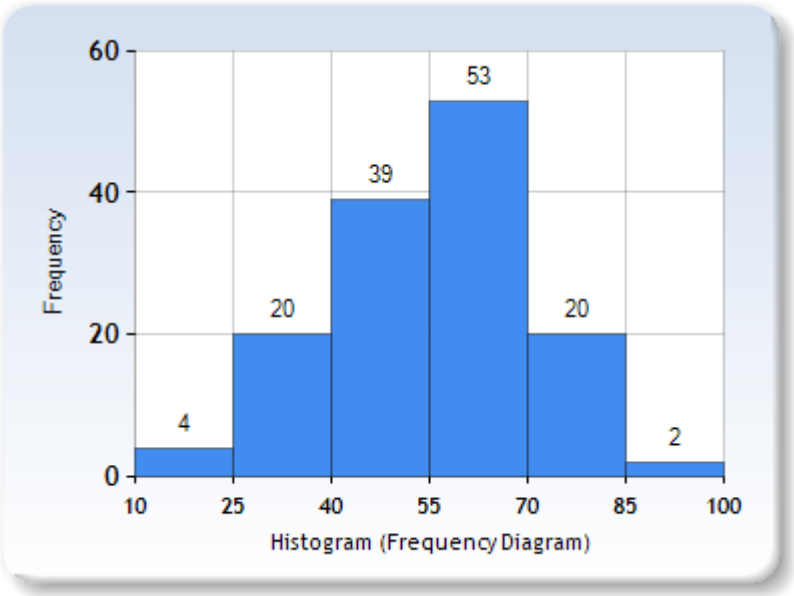
effectiveness of their instruction." Formative assessment, in accordance with the concept above, may be characterized as the measures taken by students to make additional progress in their education. Student learning is guided by obtaining feedback from instructors, who point students in the appropriate path in order to achieve the learning objectives.

To add to this, we may reference Maxwell (2004), who adds that "any progressive evaluation must provide feedback to students regarding the quality of their performance." This may be described in terms of the student's intended learning goals, as well as proposed measures for continued growth and progress.'" As a vital element of the teaching and learning process, evaluation should be based on the principles of good practice as outlined below. First and foremost, evaluation should be clear to students and devoid of any kind of prejudice in the marking of assignments. As a result, it should be based on the evaluation criteria set by the specified learning goals so that students and assessors can refer to them. As a second point, evaluation criteria should be set based on the academic level of students and in close alignment with the learning goals for each module in question. When students complete the module, the learning outcomes specify what they should be capable of demonstrating. Additional methods for evaluation might include anything from in-class tests to exams to presentations, posters to a portfolio to projects to coursework to dissertations to other types of assessments. Furthermore, Race (2005) says that evaluation should be valid, real, gradual, motivating, and fair. According to him, deep learning should be encouraged via evaluation. Lastly, evaluations should be both formative and summative in nature, with comments provided in a formal or informal manner.

Incorporation of Formative Assessment on SMARTEST

Formative assessment, according to Reece (2000), is based on three principles: Students' examinations or coursework are first subjected to short-term informal evaluation with the goal of improving their overall performance. Using question and answer format or in an instructional environment, the second idea is to provide timely feedback. The last premise is that pupils should be motivated. Feedback should be given in a nice manner, so that students are more motivated to make improvements as a result. When providing informal evaluation, it is expected that students' performance will be discussed immediately, if required. On-going progress in learning may be achieved with this method. Informal feedback goes hand in hand with formative evaluation, as a result of this. An obvious relationship exists between both, namely that the ultimate formation in learning is accomplished via providing

pupils with feedback on their entire development. Taking the example of Basics of English for Academic Purposes at level 2, a module team made the decision to design a formative assessment system that entails three phases of development and deployment. Students in BEAP 2 were first given a text regarding the harmful effects of video games, which they were expected to read and take notes on at their own leisure. The listening portion of the evaluation followed, with students taking notes on the genuine discourse, which was connected to the beneficial impacts of video game play. The writing of a brief summary of both the material and the lecture was required once the listening portion was completed. As part of the preparation for such an evaluation, the following goals were established: In the first place, pupils were expected to learn how to deal with texts and discriminate between important information and secondary material It was also intended to help students improve their listening and note-taking abilities. At the end of the course, students learned how to summarize and paraphrase material from a range of sources. Informal feedback was offered to students after they completed all of the activities for the evaluation. All, of the materials were uploaded on SMARTEST Hub and intensively used by all BEAP students.



Following that, the final papers of the students were examined, which revealed the following results: a. In general, pupils received between 55 and 69 points on a scale of one to ten. This outcome was achieved by slightly more than half of the students. The total of 20 other pupils were successful in finishing the job and received excellent grades ranging from 70 to 84. To two pupils who produced outstanding work, the highest honors were bestowed. In spite of the fact that 24 students had

grades lower than 40, 83 percent of students successfully completed the assessment component.

As a matter of tradition, it is thought that the outcomes of summative assessments are taken as an indication of the learning process. When students get timely formative feedback, the learning process may be enhanced as well. Students in BEAP 2 demonstrated, on one hand, that formative evaluation assisted them in identifying their own strengths and limitations, as well as working on areas that required improvement. Teacher help in students' learning processes and identification of students' weak spots, on the other hand, is possible. To summarize, it can be argued that formative assessment is continuous and may act as a prelude to summative evaluation at the conclusion of a learning process by providing feedback on progress.

CONCLUSIONS AND RECOMMENDATIONS

Obviously, the creation of physical hubs in the world is a brilliant idea since students, teachers and scholars move the education forward, reaching new horizons in research and education. However, the years of pandemic and the worsening situation in learning and teaching as well as restrictions in mobility have become obstacles on the way of progress. As the consequence, the introduction of educational hubs online. In case of Pre-university, SMATEST platform proved to be effective as this promoted collaboration among colleagues in London and Tashkent as well as impacted students' soft skill development positively.

Nevertheless, it has certain flows:

Firstly, the system is not user-friendly for students, especially if IT skills of those are not advanced. Even though, the system was explained and demonstrated, the majority of CPFS students did not like the platform stating that it was difficult for being used.

Secondly, the platform was abundant in information uploaded by colleagues from WIUT and UoW, but there is not a clear classification of lesson topics and revision materials.

Thirdly, the hub was a repository but students would like to have more functions for online session and video communication with both teachers and other students.

So, the ideal platform requires the functions for video communication and accurate content.

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