A Survey On Using Artificial Intelligence (AI) During Students' Exams

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Abstract

In modern education, both teachers and students are increasingly trying to consult artificial intelligence. This article examines the extent to which students rely on their own knowledge and on the help of artificial intelligence during an exam. Results of a survey among students of the Informatics program at NBU are presented.

Keywords: Survey, AI, Informatics, students'opinions

I. Introduction

The artificial intelligence (AI) rapidly becomes a key factor in education. Learning platforms and generative AI tools like ChatGPT are now available, with new technologies promising to change the way we teach and learn [1].

Nowadays the education sector, as we know, is controlled and maintained by information systems and the increasing influence of artificial intelligence technologies. [2]

In the rapidly evolving educational technology landscape, generative artificial intelligence (GenAI) tools are emerging as an innovative solution that can lead to a rethinking of the learning process. [3].

There are many software applications taking advantage of artificial intelligence (AI) in the field of education [4]. AI offers numerous methods, technologies, and tools for learning and assessment, as well as for administering educational processes. This includes the use of technologies such as natural language processing through large language models [5], image recognition technologies through computer vision [6], data analysis and prediction using neural networks [7] to enhance the learning process, and more.

The growing interest for the use of artificial intelligence in education is increases the number of scientific publications on this topic [8]. Many of this publications examin different aspects—from technical details related to the integration of AI into software applications [9], to ethical concerns, risks, and threats associated with the use of AI [10]. Research shows that AI has the potential to enhance the quality of education, making it more accessible and tailored to the needs of individual learners [11].

AI is used in many various fields of education—social sciences, engineering education, science education, medical education, life sciences, language learning, and others.

In general, five main research directions have emerged: Assessment/Evaluation, Predicting, AI Assistant, Intelligent Tutoring System (ITS), and Managing Student Learning [12], with each of them revealing a distinct area with significant potential for innovation in the educational field.

The use of AI reflects on various educational activities and processes. AI tools are employed to create intelligent tutoring systems, profiling and prediction systems, as well as for adaptive learning. Different AI algorithms and technologies are also applied to ensure the quality of higher education.

II. Survey results

After the COVID many universities' courses are graded using online environment. It is interesting whether and how often students use help and support of AI during their exams. Of course, the students are not supposed to do this, but they do.

A survey was conducted at the New Bulgarian University, to investigate to what extent during an exam held in an online environment, students resort to the help of AI to provide answers to the questions posed. The survey was aimed at 180 students,

anonymous and online. Not all students provided answers. Between 120 and 130 students answered the various questions.

Since at NBU students have the opportunity to enroll in a different number of courses each semester, the first question was about this (Fig. 1).
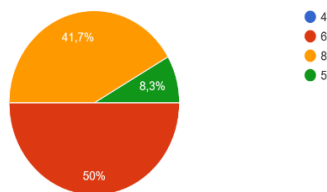
"How many courses did you enroll in last semester?"

Figure 1 Enrolled courses

From the suggested answers 4, 6, 8, etc., we see that 50% of the students have enrolled in 6 courses, 41.7% - 8 courses and a small part - 8.3% have enrolled in 5 courses.

The next question is related to the number of tests they have taken during the semester (Fig. 2). The question is open-ended, since on the one hand the number of courses is different, on the other hand it is not necessary that the exam for each course be in the form of a test.

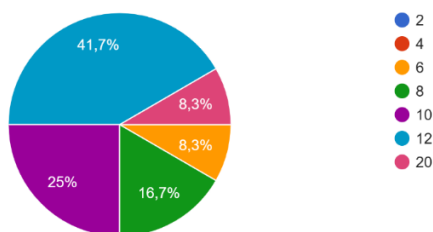*"How many tests did you take in total for all courses?"*

Figure 2 Number of tests during the semester

From the results we see a variety of answers, but we can summarize that the largest percentage of students have passed 2 or 10 tests.

From the answers to the question *"Have you used the help of artificial intelligence to answer any test?"* (Fig. 3) we notice that over 58% of students gave a positive answer.
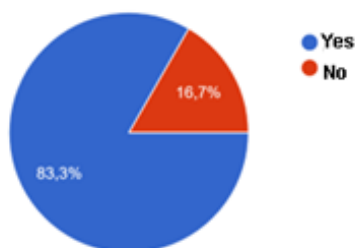

Figure 3 Using the help of AI

The answers to the next question: *"How many tests did you use AI for?"* (Fig. 4) are varied, but the fact that 25% of students answered that they used AI on 2 or 4 tests stands out. Small number of students (8.3%) had used AI for all tests. And the same percentage is for students, who had used AI only for studying the material.
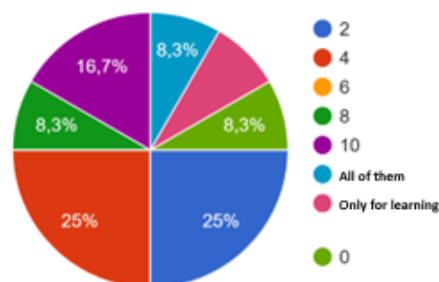

Figure 4 Number of test with AI support

To the question *"How many correct answers did you get using AI - in percentage?"*. We see that over 54% of the correct answers given by AI are in the range of 80-100% (Fig. 5).

Figure 5 Percents of correct answers

Since some of the exams were held in the university building and others were not, to the question *"You used AI assistance during a test in?"*: we see that over 70% of the students were at NBU (Fig 6).
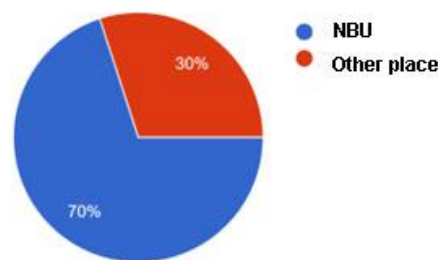

Figure 6 Place of the test

In the following chart (Fig. 7) we see which apps are most preferred for use by students. Most of the students (50%) had used ChatGPT tool.
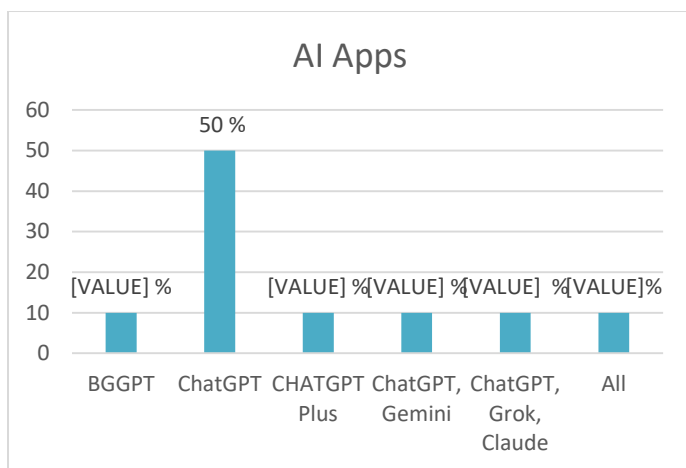
Figure 7 AI Apps

Another interesting questions is how much the students rely on their own knowledge and skills to pass the exam. ***"Do you think that without the help of AI you would have received a lower score on the test?"*** The answers are very interesting. Over 23% of students assume that with the help of AI their results are better.
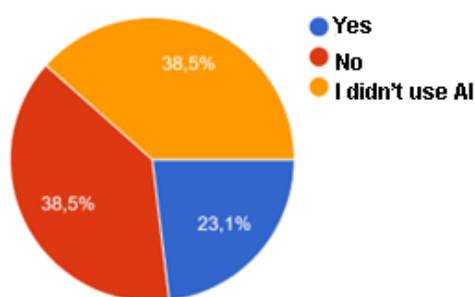

Figure 8 Scores from AI

Over 80% of students have used the help of AI for practical tasks. These are the answers of**: "Have you used AI to solve practical problems?** (Fig. 9)
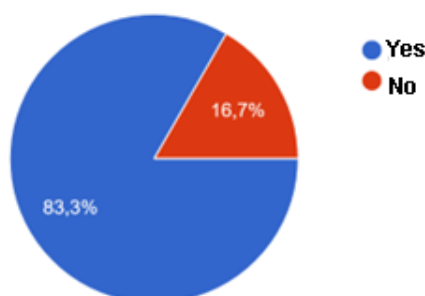

Figure 9 Practical tasks solved

With the next question students rated highly (Fig. 10) the efficiency of the results (on a scale of 1 to 5).

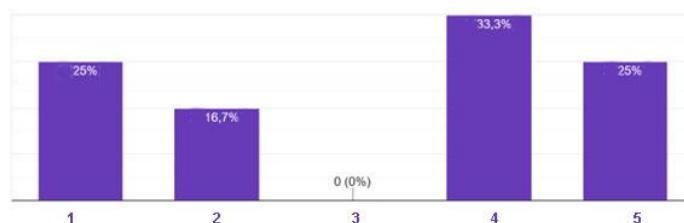*How useful was the use of AI for practical tasks?* (Fig. 10)

Figure 10 AI for practial tasks

IV Conclusion

The results of the study show that to a large extent, students resort to the help of AI to take their exams. But on the other hand, the results are still not particularly reliable. It is interesting that in terms of practical tasks, the efficiency is quite high. But we should not forget the field in which the students are trained, namely Computer Science. Their colleagues take care of the training of AI and are supposed to make special efforts in this field. Clearly, more training is needed, both for AI and for students, to be more confident in themselves, to rely on their own knowledge and skills and not to completely trust the knowledge and training of AI.

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