Exploring the Role of Protein in Student Nutrition: A Workshop Overview

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Abstract

A workshop was conducted by a group from the Future Leaders Programme's academic career path as part of the E^{3}UDRES^2 Hackathon project in December 2024. The primary objectives of the workshop were to assess the participants' understanding of protein composition and to enhance their knowledge through a series of presentations delivered by the group. First the students got to listen to a 10 minute general lecture about the structure and role of the proteins, afterward they were asked to form 5 small groups. The groups were assigned separate rooms to discuss one of the following diets with the help of moderators: vegan, omnivorous, vegetarian, paleo, ketogenic. Although the groups were locked from each other and had students from various countries with diverse eating habits, the conclusion was the same in every of them, omnivorous diet was found to be the best for the human body.

Keywords: healthy eating, E^{3}UDRES^2 students, informal learning, role of proteins

Introduction

A workshop was carried out in Budapest, during the E^{3}UDRRES^2 Hackaton in December 2024. E^{3}UDRES^2 stands for Engaged and Entrepreneurial European University as a Driver for European Smart and Sustainable Regions. The E^{3}UDRES^2 initiative organizes Hackathons, which are brief events where students develop fresh ideas and solutions to real-world issues and trending topics. These hackathons challenge participants to come up with innovative concepts within a 36 to 48-hour timeframe. Such programs help enhance the time management and organizational skills of participants (*Hackathon*) . The theme for the 2024 Hackathon was "One World," with a specific focus in Budapest on "One Protein One Soil." During the event, participants attended a general lecture and workshop, both centered around the topic of proteins and various diets. The primary objective was to analyze the protein consumption habits of the students involved in the Hackathon and to promote healthier eating practices. This case study is mostly focusing ont he workshop itself, the reactions and feedback of the students and the way they handled this kind of learning after a long a day without sleep and rest. The topic of proteins ties closely to another ongoing project within the Future Leaders Program/Jövő Vezetői Program. The Future Leaders Program is a new initiative designed for purpose-driven students, where participants engage in diverse scientific research projects. Students in this program can choose from four distinct career tracks: management, business and innovation, policy and public administration, and academia (*Jövő Vezetői Program*). In this program, our project is "Nutritional Myths and Science – Proteins in Black and White."

Miloš Obradović et al. found numerous studies, which indicated that university students exhibit a variety of risky health behaviors. These behaviors are strongly connected to youngsters eating habits too. A study on the students lifestyles in Serbia was made in this topic in 2016/17 and published in 2021 (Obradovic *et al.*, 2021). During this study a

correaltion was found between physical activity and healhtier eating habits, with active students eating more vegetables and drinking more water.

Goals

The main goal of the workshop was to educate the participants of the Hackaton about the different diets and eating habits. Our target was to create a comfortable space during the wrokshop and talk about these nutritional topics in a casual way while valuable knowledge was spread. Our primary objective was to better understand the patterns of consumption within the group and the participants' perspectives on health-conscious living, with the aim of drawing conclusions for educational use.

Methodology

At the beginning of the worskhop a general lecture was held by our 5 member team. The backround knowledge of the students was very versatile, that is why it was necessary to inform them about the structure of the proteins, amino acids, limiting amino acids, complete and incomplete proteins and theri sources. This lecture was 5-8 minutes long and every member of the team talked about their page for a minute. That was the part druing the workshop, where the traditional educating methods was used.

This lecture was followed by a more interactive program element. The students were asked to make groups of 4-5. Every gruop got a different topic from the following list: vegetarian, vegan, paleo, ketogenic and omnivorous diet. Every group was sent into a seperate room to gather as many ideas and information about the given diet as possible. This brainstorming activity was a leaded conversation by the workshop holders. The Future Leaders group members -the ones, who organised the wrokshop- used different methods to keep up the attention. Some used a Power Point Presentation to give the Hackaton students a well structured education about the choosen diet, one group member mostly collected short-animated videos to show and there was a person who came with blank sheets and pens, so the

participants could create their own presentation.

Figure 1.: The praticipant students of the round table

Figure 2.: Participants Listening to Each Other's Presentations

In the beginning of the small group program the participants played games to get to know each other better and to wake themselves up. After the socializing part the groups spent 30-40 minutes talking and learning about the given topic and share their opinions and perspectives with the guide of the moderator.

Finally everyone was sent back in the starting room and each group was given 5 minutes to provide a brief overview of the diet they had discussed and the conclusions they reached, enabling the other groups to learn about each diet. After each group presented, they resumed working on their projects.

Main results and reflections

All of the moderators found this experience fascinating and gained new skills while leading the workshop. Overall, it was an out-of-comfort-zone experience for the Future Leaders group members to teach peers of the same age and to perform using a foreign language.

This challenge-based learning—offered by both the workshops and the Hackathon event—is a new technique to encourage students to pursue lifelong learning. Lifelong learning is one of

the most important skills when it comes to personal development and career advancement. Today, it is expected that teachers inspire students to develop a love for lifelong learning and to continuously improve themselves.

This is a demanding responsibility, especially in higher education. Traditional educational methods at universities often include seminars and demonstrations, which is why this new approach to learning faces many tough challenges.

In 2021 Chan Chang-Tik and song caried out a study about learning in informal learning spaces (Chang-Tik and and song, 2023). This study was focusing on science students experiences. Using a basic qualitative method, data were gathered from video recordings and focus group interviews with 29 genetics students. Findings show that higher-performing students can regulate their learning and effectively collaborate with peers outside the classroom. In contrast, lower-performing students rely heavily on their lecturer and struggle with peer-based learning, possibly due to a lack of group learning skills. During the Hackathon event, the positive effects of working in small groups were also noticeable. Even quieter students were able to openly express their opinions during the workshop, as it is easier to share concerns in a smaller group. The shame of not knowing something and the fear of asking about it in front of a large group of people is unfortunately a highly relevant issue. These workshops and challenge-based learning events provide a great opportunity for students to learn how to overcome these negative emotions.

While this workshop was held during the Hackathon event, it was a considerable challenge to capture the participants' attention and make them active and cooperative. All five moderators used different methods to engage the students.

The group discussing the omnivorous diet was a little more passive than the others. In this group, the moderator's method was mostly to "just talk" about the diet. This strategy demands that students be highly interested in the topic. At the end, they reached a unified decision

about which diet is the best, but their journey was more difficult during the process. Another group, where the discussion focused on the keto diet, used the same method, but the results were different. This team was the most culturally diverse, which had a great impact on teamwork and brainstorming. The insight gained from this phenomenon was that the diversity of cultures seemed to fascinate everyone, and it could be a valuable tool in education. Seeing examples from different parts of the world and sharing vastly different experiences on the same topic motivated individuals to share their own experiences, thereby broadening each other's perspectives. Despite the differences between nations, the conclusion was the same: the omnivorous diet was found to be the healthiest for the human body.

Another moderator used traditional teaching methods. During the workshop, a well-prepared lecture was held, providing scientific information about the various sources of protein in a vegetarian diet. The students felt comfortable in that group, likely because they were accustomed to these formal learning methods. Although the participants in this group were less active, they made some very insightful and interesting comments toward the end of the discussion. This group demonstrated the same characteristics one might see in a regular university lecture.

The group discussing the paleo diet focused mainly on creating a good atmosphere and fostering a delightful spirit. They spent more time on the introduction, emphasizing the importance of forming relationships. In the end, this approach paid off, as the personal knowledge shared among participants inspired them to pay more attention to and respect one another. With this attitude, their collaborative work was faster and more effective than in the other groups. They also used pens to write down the ideas they collected. This method seemed to work well, as the students remembered all the information written on their papers and were able to deliver a well-prepared presentation.

The group discussing the vegan diet was also very versatile. The moderator used short

animated videos to highlight the concerns and advantages of this diet. These methods seemed to be effective. The videos captured the students' attention, even those who were tired, and sparked fascinating thoughts in their minds. After each video, they engaged in information-rich conversations about the topic. Great debates formed around each animation, and everyone had the opportunity to share their own experiences. Due to the different perspectives of the participants, it was more challenging to reach a single decision at the end, but they remembered everything we discussed, thanks to the intense debates and the emotional connections made to every fact we shared.

Conclusions

This experience was useful for both the moderators and the participants. It was a great opportunity to assess which learning method could be the most effective for spreading knowledge and potentially be used in university education. It is clearly evident that working in small groups has a significant impact on the students. They feel the need to pay attention to each other, be more active, and engage their minds. This phenomenon can be further enhanced by creating personal connections between participants. The fact that emotional connections can also improve the memorization of certain information has also been proven.

Regarding the topic of different diets with a focus on protein sources, every group reached the same conclusion at the end. Despite cultural differences, the unified decision was that the omnivorous diet is the best for both the environment and the human body.

Although this survey involved only 27 number of students, therefore far-reaching conclusions cannot be drawn.

References

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