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Improving Students Academic Through an Interactive Workshops: Case and Solution

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Abstract The undergraduate medical program coordinator reviewed last semester's academic performance and pinpointed areas for improvement during a monitoring meeting recently. The meeting found 30 students who had a GPA of less than 3.00 in their second semester. This led to a commitment from the coordinator and faculty members to help these students find solutions to their academic challenges. The solution developed was to organize a series of offline workshops held every week before the end of the semester. The workshops would be hands-on and interactive, with each student accompanied by a mentor to provide guidance and supervision during each session. The aim of workshops is to provide feedback from mentors to students, such as progress, participation, and learning challenges. Furthermore, the workshops aim to facilitate mentors to report the program to the program coordinator every two weeks for ensuring that each student is receiving the best possible support. By implementing interactive workshops and monitoring progress, educators could create a rich learning environment that not only improves academic outcomes but also develops important life skills. This study aims to examine academic challenges, implement interactive workshops as a solution, and assess their impact on student performance. By blending theory with practice, we aim to show how these workshops can help students overcome obstacles, improve learning strategies, and achieve success.

Keywords: *Academic, Student, Education, Improve, Workshop*

INTRODUCTION

The coordinator of the undergraduate medical program held a monitoring meeting to review the student's academic progress from the previous semester to identify areas for improvement. During the meeting, they discussed the students' academic performance and found that 30 students had a GPA of less than 3.0 in the

second semester. The coordinator and faculty members, deeply committed to the student's success, investigated the matter further and discovered that some students struggled to pass major courses despite taking remedial tests. It was also found that some students were struggling with motivation and finding a suitable learning technique and environment. However, it was encouraging to learn that none of the students attributed their poor academic performance to external factors such as financial difficulties, problems with their parents, partners, or friends, or health issues. The coordinator and faculty members are committed to helping students find solutions to their academic challenges and provide support to ensure their success.

In higher education, academic performance is often viewed as a reflection of a student's ability to master complex concepts, develop critical thinking skills, and effectively manage their learning. However, many students face significant challenges in achieving their academic potential, particularly in demanding programs like medical education. Factors such as lack of motivation, ineffective study techniques, and difficulty adapting to the rigorous demands of the curriculum can contribute to declining academic performance (Veine et al., 2019; Mauliya et al., 2020).

Self-determination theory (SDT) emphasizes the importance of intrinsic motivation, autonomy, and competence in driving student engagement and learning. According to SDT, when students feel that their learning activities are aligned with their interests, values, and abilities, they are more likely to be intrinsically motivated, which can lead to better academic performance. The fact that some students are struggling with motivation and finding a suitable learning technique suggests that they may not feel sufficiently autonomous or competent in their learning process. To address this, interventions can focus on enhancing students' intrinsic motivation by offering them choices in their learning paths, fostering a sense of mastery, and helping them develop self-regulated learning skills. For instance, encouraging personalized learning techniques and creating an environment that fosters student autonomy may help improve academic performance (Deci and Ryan, 1985; Ryan and Deci, 2000).

This study explores a case study from an undergraduate medical program, where a cohort of students exhibited declining academic results, with GPAs below 3.0 and struggles to pass major courses. In response to these challenges, an innovative solution was developed in the form of interactive workshops aimed at addressing the root causes of these academic difficulties. These workshops were designed to foster active learning, promote effective study strategies, and provide personalized guidance to students in need of support.

The purpose of this study is to examine the process of identifying academic struggles, the implementation of interactive workshops as a solution, and the potential impact of this approach on improving student outcomes. By drawing on

both theoretical frameworks and practical interventions, we aim to shed light on how such workshops can empower students to overcome academic hurdles, improve their learning strategies, and ultimately achieve academic success.

METHOD

After a student academic progress review meeting between the academic coordinator and faculty members, we developed a solution in the form of an engaging offline workshop to provide support and guidance to students whose academic performance was declining. These interactive workshops were held every week before the end of the semester (14 times). To ensure full participation of the students, we sought their consent and commitment prior to the workshop. In the first session, to grab the students' attention and inspire them to join the workshop voluntarily. By the end of the session, the students will better understand their learning difficulties and acquire effective study strategies, allowing them to apply various study techniques to improve their academic performance.

The workshop activities will be hands-on and utilized module instruments. Thirty target students were divided into six groups, resulting in five participants per group, which is the recommended number for small group learning (Burgess et al., 2020). Each group was assigned a mentor to supervise the sessions, help students acquire new skills and knowledge, and provide guidance during the workshop. However, the mentor must undergo a training period before being assigned as a coach.

FINDINGS AND DISCUSSION

The solution finding of this accepted case is that interactive workshops can play an important role in improving student academic performance by addressing motivation, self-awareness, learning strategies, and peer collaboration.

Interactive workshops are a solution for improving academic performance because they provide an active, engaging, and collaborative learning environment that goes beyond traditional, passive forms of teaching. By promoting critical thinking, problem-solving, peer learning, self-directed study, and personalized feedback, interactive workshops help students not only understand the material but also develop essential skills that contribute to academic success. Ultimately, these workshops make learning more dynamic, enjoyable, and effective, leading to better academic outcomes. The integration of mentoring and active learning techniques has proven to be very beneficial in building a supportive learning environment (Kamran et al., 2023; Zamiri and Esmaeili, 2024; Sulaiman et al.,2024).

Enhancing learning refers to systematic efforts and strategies to improve

students' educational experiences and outcomes. This includes deepening understanding of subjects, increasing student engagement, and developing skills such as critical thinking and problem solving. This process often involves personalizing education to meet the needs of diverse students and using feedback to improve teaching methods. Ultimately, enhancing learning creates an environment where students can thrive academically and build a love of learning.

Proposed Methods

We have developed a solution to support specific students through a series of offline Workshops that take place weekly before the end of the semester. We are confident that these workshops, with their interactive and engaging nature, will provide the necessary support and guidance to the students, helping them overcome their academic challenges. To ensure their full participation, we seek their consent and commitment before the workshops.

The first workshop is essential to set the stage for a positive and engaging experience. We aim to captivate the students' attention and inspire them to join the workshop voluntarily. We believe that through these workshops, students can significantly benefit from the knowledge and skills they acquire, and we are committed to providing them with the support they need to excel. The session aims to help students achieve the following learning outcomes:

1. By the end of the session, students will better understand their learning difficulties and acquire effective learning strategies, allowing them to implement various learning techniques to improve their academic performance.
2. By the end of the session, students will feel encouraged and motivated to continue working with the team throughout the workshop and feel confident in their ability to succeed.

The workshop will be conducted in person, and the thirty-target students will be divided into six groups. Each group will be assigned a mentor or teacher to supervise the session, help students acquire new skills and knowledge, and provide guidance during the workshop. The rundown on of the first workshop as shown here:

Picture 1. Workshop Rundown

Teachers must focus on building a strong emotional connection with their students to make a workshop more engaging. This can be achieved by creating an interactive and inclusive environment that fosters open communication. Moreover, teachers should have a clear understanding of their role in guiding students towards learning and employ appropriate techniques to help them master the subject matter. With these strategies in place, teachers can make their workshop more constructive and rewarding for their students.

Here is the conventional technique that has been used for several decades and until now. Cramming, massed instruction – depriving refractory periods between repetition trials – may increase the risk of tiredness that could trigger "serious cognitive decline in individual performance" and promote rapid decay to temporary memory (Kelly and Whatson, 2013).

Table 1. Learning techniques (Dunlosky et al., 2013)

No.	Technique	Description
1.	Elaboration interrogation	Generating an explanation for why an explicitly stated fact or concept is true
2.	Self-explanation	Explaining how new information is related to known information, or explaining steps taken during problem solving
3.	Summarization	Writing summaries (of values lengths) of to-be-learned texts
4.	Highlighting/underlining	Making potentially important portions of to-be-learned materials while reading
5.	Keyword mnemonic	Using keywords and mental imagery to associat verbal materials
6.	Imagery for text	Attempting to form mental images of text materials while reading or listening
7.	Rereading	Restudying text material again after an initial reading
8.	Practice testing	Self-testing or taking practice tests over to-be-learned material
9.	Distributed practice	Implementing a schedule of practice that sprea out study activities over time
10.	Interleaved practice	Implementing a schedule of practice that mixes different kinds of problems, or a schedule of stu that mixes different kinds of material, within a single study session

Here are fourth constructive study techniques that enhance long term memory:

1. Self-explanatory Practice

This technique is ideal for materials that require more comprehension, such as the Renin-Angiotensin System in the human body. After reading the materials, make some questions and try to answer them. It is better to answer these questions with your friends, as long-term retention of information requires active participation in the learning process (Bjork et al., 2013). After answering the questions, share your answer with your friends and ask for feedback on your recall of information. By using these techniques, you can make your learning process more effective, engaging, and fruitful.

2. Spacing Repetition

Spaced repetition means a study technique that decides the enormous content into a series of short-piece information across temporally spaced intervals (Kelley and Whatson, 2013).

3. Distribution of Practice

Dedicate 10 minutes every day to read your study materials. This technique works well for materials that require a lot of recall, such as foreign languages or content-heavy courses (Roediger III and Pyc, 2012). By repeating this practice every day, you can improve your memory and retention of the material.

4. Retrieval Practice Through Formative Tests

This technique is perfect for materials that require more recall, such as mechanisms or content-heavy courses. After reading the material, answer quizzes every other day in a week. You can create multiple-choice questions with your friends to create a database of questions that will help you retain information. Sharing your questions with your friends and answering them together will also make the learning process more engaging.

Meanwhile, the methods used in this workshop potentially suffer from some common pitfalls that may affect the results and applicability of this intervention to the wider population. Participation, selection, mentor, and volunteer biases need to be identified and minimized, and individual differences in learning experiences need to be considered in the evaluation of workshop outcomes. To improve generalizability, replication with a larger and more diverse sample is needed, as well as testing the impact of this method on different groups of students at different institutions.

EVALUATION

At the end of each session, the students will receive thoughtful and constructive feedback from their mentors. This feedback will focus on their participation, progress, and any challenges they may have encountered during the workshops. The teachers will also monitor the effectiveness of their mentees' study groups and report back to the program coordinator every two weeks to ensure that we are providing the best possible support to our students.

CONCLUSION

Interactive mentoring (workshop) presumably can significantly improve students' academic performance or GPA. By actively involving students in the learning process, they not only better understand the material but also develop critical and collaborative skills. The case presented illustrates how this approach not only increases undergraduate medical student motivation and interest but also provides solutions to challenges faced in learning. Therefore, the implementation of interactive workshops should be considered as an effective strategy for improving

the quality of education.

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