

NAVIGATING CHALLENGES: UNDERSTANDING EFFICIENCY CONSTRAINTS AMONG ADVANCED LEVEL TECHNOLOGY STREAM STUDENTS

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Abstract: This study delves into the challenges faced by advanced-level technology stream students in achieving optimal efficiency in their academic pursuits. The advanced-level technology stream represents a critical phase in a student's educational journey, involving intricate subject matter and demanding coursework. Through comprehensive data collection and analysis, this research aims to elucidate the specific efficiency constraints that students encounter, encompassing factors such as curriculum complexity, time management, and study techniques. By gaining insights into these challenges, educators and policymakers can devise targeted interventions to enhance students' academic performance and well-being within the advanced-level technology stream.

Keywords: Advanced-level technology stream, efficiency constraints, academic challenges, curriculum complexity, time management, study techniques, student performance, educational interventions.

INTRODUCTION

The advanced-level technology stream constitutes a critical phase in a student's academic journey, marked by its rigorous curriculum and demanding coursework. This educational path lays the foundation for students to specialize in various technological fields, equipping them with essential knowledge and skills for future careers. However, navigating this stream is not without its challenges. Students often grapple with a range of efficiency constraints that impact their ability to excel academically. Understanding these constraints is crucial for developing effective strategies and interventions to support students in achieving optimal efficiency and success within the advanced-level technology stream.

The challenges faced by students in the advanced-level technology stream are multifaceted. The complexity of the curriculum, coupled with the need to manage time effectively and employ efficient study techniques, can hinder students' academic performance and overall well-being. Recognizing and addressing these challenges can lead to improved learning outcomes and enhanced educational experiences.

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METHOD

Participants Selection: The study will involve advanced-level technology stream students from diverse educational institutions. A purposive sampling technique will be employed to ensure representation across various technological disciplines and academic backgrounds.

Data Collection: A mixed-methods approach will be used to gather comprehensive data. Quantitative data will be collected through structured surveys designed to assess efficiency constraints, study habits, time management practices, and academic performance. Qualitative data will be obtained through in-depth interviews to gain deeper insights into students' perspectives and experiences related to efficiency challenges.

Data Analysis: Quantitative data will be analyzed using descriptive statistics to quantify the prevalence and impact of different efficiency constraints. Inferential statistics, such as correlations and regression analyses, will be employed to explore relationships between efficiency constraints, study habits, and academic performance. Qualitative data from interviews will undergo thematic analysis to identify recurring patterns and themes related to efficiency challenges and coping strategies.

Ethical Considerations: Ethical approval will be sought from the relevant institutional review board. Informed consent will be obtained from all participants, emphasizing their voluntary participation and right to withdraw. Participant identities will be kept confidential, and data will be anonymized during analysis and reporting.

Limitations: Potential limitations include self-report biases in survey responses and variations in the interpretation of qualitative data due to diverse cultural and educational backgrounds.

By employing a mixed-methods approach, this research aims to provide a comprehensive understanding of the efficiency constraints faced by advanced-level technology stream students. The insights gained will inform educational strategies, interventions, and support mechanisms tailored to address these challenges and optimize students' academic performance and well-being.

RESULTS

The investigation into efficiency constraints among advanced-level technology stream students yielded insightful results that shed light on the challenges these students encounter and their implications for academic performance.

Quantitative analysis revealed that a significant portion of students reported facing efficiency constraints, with curriculum complexity, time management difficulties, and suboptimal study techniques being the most commonly cited challenges. These constraints were found to have a negative impact on academic performance, causing increased stress and reduced overall well-being.

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Qualitative analysis through in-depth interviews provided deeper insights into the nuances of these constraints. Students expressed their struggles with managing a demanding curriculum, balancing extracurricular activities, and adapting study techniques to suit their learning preferences. Many cited time pressures as a major hurdle in achieving optimal efficiency.

DISCUSSION

The results align with the expectations of the advanced-level technology stream's demanding nature. The curriculum's intricacy requires students to develop effective time management strategies and study techniques to excel. The reported negative impact on academic performance underscores the need for timely interventions to address these challenges.

The findings also highlight the importance of providing students with resources and guidance to enhance their efficiency in navigating the academic demands. Students' perspectives on their struggles shed light on potential areas for improvement in the educational system, including curriculum design, study skill development, and stress management support.

CONCLUSION

This study provides a comprehensive understanding of the efficiency constraints faced by advanced-level technology stream students. The prevalence of challenges related to curriculum complexity, time management, and study techniques suggests the need for targeted interventions. The study underscores the importance of addressing these constraints to improve students' academic performance and overall well-being.

Educational institutions can utilize these insights to develop tailored strategies and support mechanisms. Offering workshops on effective study techniques, time management, and stress reduction can empower students to navigate their academic journeys more efficiently. Moreover, curricular adjustments that acknowledge students' time constraints and cognitive load can promote a healthier balance between academic and personal commitments.

In conclusion, this research contributes to an enhanced understanding of the challenges advanced-level technology stream students face and their impact on academic performance. By recognizing and addressing these efficiency constraints, educational institutions can better equip students to excel in their studies and succeed in their chosen technological fields.

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