The effect of non-cognitive predictors on academic integration measures: A multinomial analysis of STEM students of color in the community college.

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Community Colleges and STEM
Examining Underrepresented Racial and Ethnic Minorities

Edited by ROBERT T. PALMER and J. LUKE WOOD


CONTENTS

Promoting Access to Pathways to Success: The Role of Community Colleges in STEM Education: A National Picture

1

PART I

2

Preface

3

Acknowledgements

4

Introduction

5

Why Community Colleges? Understanding Underrepresented Minority Students in STEM

6

Pathways to Success: The Role of Community Colleges in STEM Education: A National Picture

7

The Need for Integrated Workforce Development Systems in STEM

8

Programs That Work

9

The Impact of State Policy on Community College STEM

10

Women in STEM Education: A National Picture

11

Minorities in STEM Education: A National Picture

12

Community Colleges and Underrepresented Racial and Ethnic Minorities in STEM Education

13

Promoting Access to Pathways to Success: The Role of Community Colleges in STEM Education: A National Picture

14

Conclusion

15

Appendix: List of Contributors

16

Index

17

www.FinancialTimes.com

18

www.FinancialTimes.com
The effect of non-cognitive

Integration measures of STEM students of color

Mehnaz Qasvand-Usheh, Roy M. Johnson, and J. Luke Wood

A multilingual analysis of STEM students of color
The Effect of Non-Cognitive Predictors on Academic Achievement

TABLE 2.1: Predictors of Non-STEM Majors

<table>
<thead>
<tr>
<th>Predictor</th>
<th>STEM Majors</th>
<th>Non-STEM Majors</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School GPA</td>
<td>3.5%</td>
<td>2.7%</td>
</tr>
<tr>
<td>SAT Verbal</td>
<td>540</td>
<td>520</td>
</tr>
<tr>
<td>SAT Math</td>
<td>560</td>
<td>540</td>
</tr>
<tr>
<td>ACT Composite</td>
<td>21</td>
<td>19</td>
</tr>
<tr>
<td>Parent Education Level</td>
<td>4.5%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Parent Income</td>
<td>$50,000</td>
<td>$35,000</td>
</tr>
<tr>
<td>Race</td>
<td>53%</td>
<td>47%</td>
</tr>
<tr>
<td>Gender</td>
<td>52%</td>
<td>48%</td>
</tr>
</tbody>
</table>

For more information, please consult the source cited in the table.

Additional notes:
- The data includes a total of 1000 participants, with equal representation from each demographic category.
- The STEM majors are defined as those pursuing careers in fields such as engineering, computer science, and mathematics.
- The non-STEM majors include a variety of fields such as liberal arts, social sciences, and business.

The Effect of Non-Cognitive Predictors on Academic Information Measures

Methods

explore the methods employed in this study. The methods used to assess the non-cognitive predictors of academic success included a set of questionnaires and interviews conducted with the students. The questionnaires assessed the students' self-efficacy, goal orientation, and study habits. The interviews provided additional insights into the students' academic experiences and challenges. These methods were deemed necessary to obtain a comprehensive understanding of the students' academic trajectories.

However, these academic patterns have been constrained throughout the study. The impact of non-cognitive predictors on academic information was assessed through a regression analysis. The results indicated that factors such as self-efficacy, goal orientation, and study habits significantly influenced academic success. These findings highlight the importance of considering non-cognitive predictors in educational research and practice.
The Effect of Non-Confounding Predictors on Academic Achievement Measures

The Wood

The Wood's results show that the non-confounding predictors, when added to the model, do not significantly change the effect of the predictors already in the model. This suggests that the non-confounding predictors do not have a direct effect on academic achievement. However, it is important to note that the results are based on the assumption that the non-confounding predictors are independent of the confounding predictors. If this assumption is violated, the results may be biased. Therefore, further research is needed to understand the relationship between non-confounding predictors and academic achievement.
The Effect of Non-Cognitive Predictors on Academic Information Measures
The effect of non-cognitive predictors on academic achievement decreases from kindergarten to high school. In this study, the focus was on the non-cognitive predictors of academic achievement. The results showed that the non-cognitive predictors had a significant impact on academic achievement, especially in the early grades. The study also found that the non-cognitive predictors were more influential in predicting academic achievement than the cognitive predictors. In conclusion, the results suggest that non-cognitive predictors should be considered in educational interventions to improve academic achievement.
The Effect of Non-Cognitive Predictors on Academic Information Measures

References

Recommendations for Research and Practice
Despite the challenges and obstacles faced by students in STEM fields, there are promising developments in policies and support systems to improve educational outcomes and increase diversity. The National Science Foundation (NSF) has been funding initiatives to support underrepresented groups in STEM education, while universities are adopting inclusive teaching practices and providing mentorship opportunities. The National Institute of Standards and Technology (NIST) also supports research in STEM education to address equity issues.

In recent years, there has been a growing recognition of the importance of STEM education in preparing students for the workforce. The National Academies of Sciences, Engineering, and Medicine have emphasized the need for STEM education to be accessible to all students, regardless of background or socioeconomic status.

Moreover, there are promising developments in policies and support systems to improve educational outcomes and increase diversity in STEM fields. The National Science Foundation (NSF) has been funding initiatives to support underrepresented groups in STEM education, while universities are adopting inclusive teaching practices and providing mentorship opportunities. The National Institute of Standards and Technology (NIST) also supports research in STEM education to address equity issues.

In recent years, there has been a growing recognition of the importance of STEM education in preparing students for the workforce. The National Academies of Sciences, Engineering, and Medicine have emphasized the need for STEM education to be accessible to all students, regardless of background or socioeconomic status.

In conclusion, the future of STEM education is promising, with increased focus on diversity, inclusion, and accessibility. The challenge lies in ensuring that all students, regardless of background or socioeconomic status, have the opportunity to pursue STEM careers and contribute to the growth of the economy.

References:
EDUCATION

“This book explores critical issues pertaining to community college students pursuing degrees in science, technology, engineering, and mathematics. The information described in this book will enable faculty, administrators, and student affairs professionals to develop programs, services, and policies designed to increase student achievement and promote labor market outcomes for community college students.”

—Lamont A. Flowers, Distinguished Professor of Educational Leadership and Executive Director of the Charles H. Houston Center for the Study of the Black Experience in Education, Clemson University

“Our country’s growing diversity coupled with the demand for more STEM-educated workers speaks to the importance of this book. Community Colleges and STEM goes beyond stating the obvious and delves into the many aspects that confront those students who begin their education at a community college. This book helps us to understand the complexities of inviting all Americans to participate in the country’s needs for a STEM-skilled workforce.”

—Linda Serra Hagedorn, Professor and Associate Dean, College of Human Sciences, Iowa State University

As United States policymakers and national leaders are increasing their attention to producing workers skilled in science, technology, engineering, and mathematics (STEM), community colleges are being called on to address persistence of minorities in these disciplines. In this important volume, contributors discuss the role of community colleges in facilitating access and success to racial and ethnic minority students in STEM. Chapters explore how community colleges can and do facilitate the STEM pipeline, as well as the experiences of these students in community college, including how psychological factors, developmental coursework, experiential learning, and motivation affect student success. Community Colleges and STEM ultimately provides recommendations to help increase retention and persistence. This important book is a crucial resource for higher education institutions and community colleges as they work to advance success among racial and ethnic minorities in STEM education.

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