

“Developing Targeted Interventions to Enhance Emotional Competence and Promote Mastery-Oriented Goals for Academic Success and Adaptation among First-Generation Students”

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ABSTRACT

Background: First-generation students face unique challenges in academic adjustment, including difficulties with emotional regulation and goal setting. Emotional competence and mastery-oriented goals are crucial for their success.

Objectives: This study aimed to develop and evaluate targeted interventions to enhance emotional competence and promote mastery-oriented goals among first-generation students.

Methods: A quasi-experimental design was employed with 160 undergraduate participants divided into intervention and control groups. The intervention consisted of an 8-week emotional competence training program. Pre- and post-test assessments measured emotional competence, mastery-oriented goals, academic performance, and adaptation. Data were analyzed using t-tests, and regression analysis.

Results: The intervention group showed significant improvements in emotional competence ($M = 60.2$, $SD = 7.1$, $p < 0.01$) and mastery-oriented goals ($M = 52.1$, $SD = 6.2$, $p < 0.01$) compared to the control group. Regression analysis indicated that emotional competence ($\beta = 0.46$) and mastery-oriented goals ($\beta = 0.33$) were significant predictors of academic performance and adaptation. The intervention led to sustained improvements in GPA ($M = 3.5$, $SD = 0.4$, $p < 0.05$) and emotional adjustment ($M = 57.2$, $SD = 6.3$, $p < 0.05$) at follow-up.

Conclusions: The findings demonstrate that targeted interventions can significantly enhance emotional competence and mastery-oriented goals among first-generation students, leading to improved academic adaptation and success. Future research should expand participant demographics and explore the scalability of these interventions.

Keywords: first-generation students, emotional competence, mastery-oriented goals, academic success, intervention study.

INTRODUCTION

First-generation students, whose parents have not pursued higher education, often face significant challenges in adjusting to the academic environment. These students frequently experience difficulties in emotional regulation, goal setting, and adapting to the demands of university life (Seo, 2022; Wang et al., 2022). Unlike their peers, first-generation students often lack cultural and social capital, which can hinder their ability to navigate the complexities of higher education. The absence of familial guidance and resources places these students at a disadvantage, making it essential to explore ways to support their academic success and overall well-being.

Emotional competence, the ability to identify, understand, and regulate one's emotions, plays a critical role in managing stress, building resilience, and sustaining motivation in academic settings. First-generation students, in particular, may struggle with emotional regulation as they encounter new challenges in a university environment (Trigueros et al., 2019). Developing emotional competence is key to their academic success, as it enables students to cope with academic pressures, maintain focus, and persevere in the face of obstacles (Dougherty & Sharkey, 2017). Therefore, fostering emotional competence in first-generation students is crucial for enhancing their adaptation to higher education.

Mastery-oriented goals, which emphasize learning, growth, and improvement, have been shown to promote deep learning, resilience, and sustained academic effort. Unlike performance-oriented goals that focus on achieving high grades or outperforming peers, mastery-oriented goals encourage students to focus on developing their skills and understanding (Shakarian, 1995). For first-generation students, adopting mastery-oriented goals is particularly beneficial, as it fosters a long-term commitment to learning, which is essential for overcoming the unique challenges they face in higher education (Datu, Valdez, & Yang, 2022). Enhancing mastery-oriented goals in these students could improve their academic adaptation and success.

The process of academic adaptation for first-generation students involves not only meeting academic requirements but also adjusting emotionally and psychologically to the demands of university life. While many studies have focused on the academic and socio-economic challenges faced by first-generation students, there is limited research on their emotional and psychological adaptation. Academic success for these students is often tied to their ability to regulate emotions and set meaningful, mastery-oriented goals (López, Santelices, & Taveras, 2023). Interventions aimed at enhancing these areas could significantly improve their academic performance, retention rates, and overall well-being.

Although previous research has explored various aspects of first-generation students' academic experiences, including socio-economic barriers and social isolation (Bahack & Addi-Racciah, 2022; Belando-Montoro, Naranjo-Crespo, & Carrasco-Temino, 2022), there has been a notable lack of focus on emotional competence and mastery-oriented goals. Existing studies have often emphasized the role of family background and social capital in shaping academic trajectories (Buchmann, Kriesi, Bayard, Sander, & Bundel, 2021; Martin, Stefl, Cain, & Pfirman, 2020), but few have addressed the importance of emotional regulation in academic success (Seo, 2022). Furthermore, while mastery-oriented goals have been linked to positive academic outcomes (Datu et al., 2022), little attention has been given to how these goals can be cultivated through specific interventions designed for first-generation students. This study

seeks to fill these gaps by developing and evaluating interventions that target emotional competence and mastery-oriented goals, with the aim of improving academic adaptation.

This research is significant because it addresses two critical yet often overlooked factors emotional competence and mastery-oriented goals that are essential for academic success in first-generation students. By enhancing these areas, the study has the potential to not only improve academic performance but also support first-generation students' emotional adjustment to university life. The findings from this research could provide valuable insights into the design of interventions that higher education institutions can implement to promote the success of first-generation students, ultimately contributing to greater equity and inclusivity in academic achievement

The primary aim of this research is to develop and evaluate interventions designed to enhance emotional competence and promote mastery-oriented goals among first-generation students. Specifically, the study aims to assess the impact of emotional competence and mastery-oriented goals on academic adaptation and performance among first-generation students, and explore their relationship with academic success; and to develop and test the effectiveness of interventions aimed at enhancing emotional competence and mastery-oriented goals, and examine the long-term effects of these interventions on academic success and emotional adjustment.

METHODOLOGY

This research employed a quasi-experimental design to examine the impact of an emotional competence training program on various academic and emotional outcomes among undergraduate students. The study sample consisted of 160 participants who were randomly assigned to either an intervention group or a control group. The intervention group participated in an 8-week emotional competence training program designed to enhance emotional awareness, regulation, and goal-setting. This program aimed to equip students with the necessary emotional skills to better manage academic pressures and improve their overall performance and adaptation in academic environments. The control group did not receive any form of intervention and continued their usual academic activities.

Both groups underwent pre- and post-test assessments that measured emotional competence, mastery-oriented goals, academic performance, and academic adaptation using a series of validated psychometric scales and academic performance metrics, such as GPA. Emotional competence was measured by a scale that assessed the participants' ability to identify, regulate, and express emotions effectively, while mastery-oriented goals were measured by a scale designed to evaluate the participants' focus on personal improvement and learning rather than merely achieving grades or outperforming others. Academic performance was gauged by participants' GPA, and academic adaptation was measured by how well they adjusted to the demands of academic life, including time management, stress handling, and balancing various academic tasks.

To analyze the collected data, a range of statistical techniques were employed. T-tests were used to compare the pre- and post-test results within and between the intervention and control groups. Regression analysis was used to evaluate the predictive power of emotional competence and mastery-oriented goals on academic outcomes, including performance and adaptation. This allowed the researchers to determine the extent to which emotional skills and goal orientation contributed to the participants' success in academic settings.

Ethical considerations were rigorously followed throughout the study. Informed consent was obtained from all participants prior to their involvement, ensuring that they were fully aware of the study's purpose, the nature of the intervention, and their rights as participants. Additionally, confidentiality of the participants' data was maintained, and they were assured that their academic performance and personal information would not be disclosed.

RESULTS

Table 1: Demographic Characteristics of the Sample (N = 160)

Category	M (SD)	f (%)
Gender	1.50 (0.501)	
Male		80 (50.0)
Female		80 (50.0)
Education	2.46 (0.775)	
Undergraduate		48 (30.0)
Graduate		112 (70.0)
Age	2.29 (0.811)	
19-22		132 (82.5)
23-25		28 (17.5)

The results from Table 1 present the demographic characteristics of the sample, consisting of 160 participants. The gender distribution is balanced, with 50% males and 50% females. In terms of education, a majority of participants (70%) are graduate students, while 30% are undergraduates. Regarding age, the majority of participants fall within the 19-22 age range, making up 82.5% of the sample, while 17.5% are between the ages of 23 and 25.

Table 2: Impact of Emotional Competence and Mastery-Oriented Goals on Academic Adaptation and Performance (Regression Analysis)

Dependent Variable	Predictor Variables	β (Standardized Coefficient)	t-value	p-value	R ²
Academic Performance (GPA)	Emotional Competence	0.41	5.32	< 0.01	0.36
	Mastery-Oriented Goals	0.38	4.89	< 0.01	
Academic Adaptation	Emotional Competence	0.46	6.01	< 0.01	0.42
	Mastery-Oriented Goals	0.33	4.02	< 0.01	

The regression analysis in Table 2 highlights the impact of emotional competence and mastery-oriented goals on academic performance and academic adaptation. Emotional competence significantly predicts academic performance, with a standardized coefficient of 0.41 and a p value less than 0.01, indicating that students with higher emotional competence tend to perform better academically. Mastery-oriented goals also show a significant positive effect on academic performance ($\beta = 0.38, p < 0.01$). Together, these predictors explain 36% of the variance in GPA. Similarly, emotional competence ($\beta = 0.46, p < 0.01$) and mastery-oriented goals ($\beta = 0.33, p < 0.01$) significantly predict academic adaptation, accounting for 42% of the variance.

Table 3: Effectiveness of Interventions on Emotional Competence and Long-Term Effects on Academic Success and Emotional Adjustment

Variable	Group	Mean (SD) - Pre-test	Mean (SD) - Post-test	t-test Result	p-value
Emotional Competence (Post-Test)	Intervention Group	45.3 (6.5)	60.2 (7.1)	t(158) = 7.83, significant	< 0.01
	Control Group	44.9 (6.3)	45.6 (6.4)	t(158) = 0.52, not significant	0.61
Mastery-Oriented Goals (Post-Test)	Intervention Group	38.2 (5.4)	52.1 (6.2)	t(158) = 8.47, significant	< 0.01
	Control Group	37.8 (5.2)	38.4 (5.3)	t(158) = 0.32, not significant	0.75
Academic Success (Follow-up)	Intervention Group	2.8 (0.3)	3.5 (0.4)	t(158) = 6.02, significant	< 0.05
	Control Group	2.7 (0.4)	2.8 (0.4)	t(158) = 0.92, not significant	0.31
Emotional Adjustment (Follow-up)	Intervention Group	40.5 (5.8)	57.2 (6.3)	t(158) = 7.13, significant	< 0.05
	Control Group	41.0 (5.7)	42.1 (5.9)	t(158) = 0.89, not significant	0.33

In Table 3, the effectiveness of the interventions on emotional competence and their long-term effects on academic success and emotional adjustment are demonstrated. The intervention group showed a significant improvement in emotional competence from pre-test to post-test, with the mean score increasing from 45.3 to 60.2 ($t(158) = 7.83, p < 0.01$). In contrast, the control group did not show a significant change in emotional competence ($p = 0.61$). Mastery-oriented goals also improved significantly in the intervention group, with the mean increasing from 38.2 to 52.1 ($t(158) = 8.47, p < 0.01$), whereas no significant change was observed in the control group ($p = 0.75$). In terms of academic success, the intervention group experienced a significant improvement from a mean GPA of 2.8 to 3.5 during follow-up ($t(158) = 6.02, p < 0.05$), while the control group did not show any notable change ($p = 0.31$). Emotional adjustment followed a similar trend, with the intervention group showing significant improvement from a mean of 40.5 to 57.2 ($t(158) = 7.13, p < 0.05$), while the control group remained relatively unchanged ($p = 0.33$).

DISCUSSION

This study aimed to develop and evaluate targeted interventions designed to enhance emotional competence and promote mastery-oriented goals among first-generation students. The results indicate significant improvements in emotional competence, mastery-oriented goals, academic performance, and emotional adjustment following the interventions. These findings contribute to the growing body of literature emphasizing the importance of emotional and motivational factors in academic success.

The regression analysis revealed that both emotional competence and mastery-oriented goals are significant predictors of academic performance and adaptation. Emotional competence demonstrated a stronger relationship with academic adaptation ($\beta = 0.46$) compared to mastery-oriented goals ($\beta = 0.33$). This supports previous research indicating that emotional intelligence is crucial for academic achievement, particularly for first-generation students who often face unique challenges (Lawrie & Kim, 2024). Emotional competence enables students to navigate stress and maintain motivation, ultimately fostering a more adaptable approach to academic challenges (Collie, Martin, & Differences, 2024).

The findings also align with research by (Miller, Fassett, Palmer, & Emotion, 2021), which emphasizes the importance of mastery-oriented goals in academic contexts. Students who adopt mastery-oriented goals tend to focus on learning and personal growth rather than solely on performance, leading to enhanced engagement and resilience (Hnin, 2024). This study corroborates those findings, indicating that interventions that target these constructs can significantly improve academic outcomes.

The results from Table 3 highlight the effectiveness of the 8-week emotional competence training program. Significant increases were observed in both emotional competence and mastery-oriented goals among the intervention group, with t-values indicating strong statistical significance ($p < 0.01$). In contrast, the control group showed no significant changes, reinforcing the idea that the intervention was effective in achieving its objectives.

These findings are consistent with prior studies that demonstrate the efficacy of targeted emotional training programs in enhancing emotional intelligence and related outcomes (Wicaksono, Arifin, & Sumarsono, 2024). Moreover, the increase in academic success and emotional adjustment reported at the follow-up suggests that the benefits of the interventions may extend beyond immediate outcomes, potentially fostering long-term academic resilience (Lohner & Aprea, 2021).

The significant improvements in academic success (GPA) and emotional adjustment observed in the intervention group at follow-up further underscore the long-lasting impact of the interventions. These findings align with previous research suggesting that early interventions focused on emotional competence can have enduring effects on students' academic trajectories (Hutchison, Russell, & Wink, 2020).

The sustained improvement in emotional adjustment is particularly noteworthy, as emotional well-being plays a critical role in overall academic success. Studies have shown that students with better emotional regulation and adjustment are more likely to perform well academically (Graziano, Reavis, Keane, & Calkins, 2007).

CONCLUSION

This study provides compelling evidence for the effectiveness of interventions aimed at enhancing emotional competence and mastery-oriented goals among first-generation students. The significant relationships identified between these constructs and academic outcomes emphasize the need for continued focus on emotional and motivational factors in educational settings. Future research should explore the scalability of these interventions and their applicability to diverse student populations.

LIMITATION AND RECOMMENDATION OF THE STUDY

Future research should broaden participant demographics to include diverse socio-economic backgrounds and educational institutions, enhancing the generalizability of findings. Longitudinal studies could provide insights into the long-term impact of emotional competence and mastery-oriented goals. Educational institutions should integrate emotional competence training into curricula through workshops, and explore additional interventions, such as mindfulness practices. Involving parents and the community could further support students' emotional and academic development.

However, the study has limitations. The sample was restricted to first-generation college students, which may limit generalizability. The 8-week intervention duration might be insufficient for capturing long-term benefits. Additionally, reliance on self-reported measures introduces biases; incorporating objective assessments could address this. External factors affecting outcomes were not controlled, and the follow-up period may not adequately reflect sustained impacts. Conducting the study in a single institution also limits applicability, highlighting the need for research across varied contexts to better understand the effectiveness of these interventions.

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