Balancing Academic Responsibilities, Work, and Leadership: Assessing the Mental Workload and Emotional Capacity of Working Students and Student Leaders

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Abstract

The demands of balancing academic responsibilities, work obligations are increasingly evident among students in the National Capital Region (NCR), where the pressures of urban life, competitive job markets, and rising living costs constitute significant challenges. Students have long struggled to balance academics and work, but with the rise of part-time jobs, internships, and other opportunities, these pressures have intensified, often leading to mental and emotional strain. Despite growing awareness of these issues, there is still a lack of effective support systems to address the concerns about students' well-being. The purpose of this study was to assess the mental workload and emotional capacity of students and working students in the National Capital Region (NCR) who simultaneously managed work and academic responsibilities. By integrating the Cognitive Load Theory, Job Demands-Resources (JD-R) Model, and Student Engagement Theory, this study investigated the relationships among academic demand and work demand that affect students' mental and emotional well-being. A mixed-methods design was employed, combining quantitative surveys and qualitative interviews. The study sampled 405 college students across various NCR institutions. Data was analyzed using SPSS and AMOS software, utilizing Structural Equation Modeling (SEM) to evaluate the hypothesized relationships. Findings indicated that roles in academic and work significantly increased mental workload, which in turn affected academic performance. Emotional capacity was positively influenced by social support, time management, and self-efficacy. Despite the challenges, many students displayed resilience through effective coping strategies. Recommendations included developing flexible academic policies, strengthening support networks, and providing time management and mental health resources to promote student well-being and success.

Keywords
Job Demands-Resources Model, Mental Workload, Emotional Capacity, Working Students, Higher Education

1. Introduction
This paper delves into the higher education and working students who study in the National Capital Region (NCR), which faces an increasing challenge in balancing their academic and work responsibilities. The increasing cost of urban life, the competitive job market, and the demands for living costs force students to juggle multiple roles in one. Despite awareness of these challenges, colleges, institutions, and universities struggled to implement an effective support system for students who require assistance in managing and handling their workload. Balancing academic and

work firmly affects the well-being of the student Jundis et al., (2024), with the stress from handling multiple roles hindering the overall well-being and performance. However, understanding this intricate relationship within academic workload, work responsibilities and its success remains limited.

This study aims to analyze the mental capacity and mental workload of higher education and working students in NCR by identifying the key stressor that primarily impacts their academic performance and overall well-being. By integrating the Cognitive Load Theory (CLT), Job Demand-Resources (JD-R) Model, and Student Engagement Theory, these theories seek to evaluate how multiple roles are related in affecting students' mental resilience. Using quantitative surveys and qualitative interviews, the study examines the coping mechanisms of students and the interventions of institutions that may enhance the ability of the students to balance their multiple responsibilities positively. The significant measure of this study extends beyond academia; this crucial challenge is worth addressing to prevent burnout, improve students' engagement and performance, and foster long-term career success. By giving insight into improvements in institutional support to reduce the negative effects of their responsibilities, as they play a vital role. By exploring the relationship between academic and work demand, this paper offers an insight into the potential support and strategies for the student to have success while minimizing the negative psychological impact.

1.1 Objectives
The main objective of this study is to assess the mental workload and emotional capacity of higher education and working students in the National Capital Region, particularly in how they balance their academic and work responsibilities. Specifically, the study aims to evaluate the levels of mental workload experienced by these students using validated measurement tools. It also seeks to analyze the direct impact of emotional strain arising from academic and work roles on their well-being and academic performance. Furthermore, the research intends to explore the role of coping strategies as a mediating factor between role-related stress and academic outcomes. In addition, it aims to examine how support systems may moderate the effects of mental and emotional challenges on student performance. Finally, the study seeks to identify institutional strategies, grounded in empirical evidence, that can enhance both the well-being and academic success of higher education and working students.

2. Literature Review
Work-study life balance (WSLB) is a crucial challenge for higher education and working students as they manage academic responsibilities, part-time jobs, and personal lives. As well as recognizing all of the challenges they are facing and implementing strategies, these students can make themselves sustainable in a work-study life balance. According to the study, Pološki Vokić, N., et al (2021), emphasizing the effects of academic and work responsibilities of working students, and strong time management and self-motivation may occur to be developed by working students. While undergraduate students who depend on their family's financial support, coping strategies, and institutional interventions are necessary, responsibilities deepen the emotional, mental, and cognitive strains of the students. Furthermore, Mental Workload and Stress relate to cognitive performance that is needed to handle multiple responsibilities of higher education and working students. The study classifies the cognitive load into intrinsic cognitive load (ICL), extraneous cognitive load (ECL), and germane load (GCL) which academic and work stress influences the working students in academic expectations and work obligations, while students demands a greater cognitive engagement that leading to stress Abbas, S. G., et al (2025).

Moreover, the Emotional Capacity and Coping Mechanisms are vital to undergraduate higher education and working students. It refers to their understanding and expressing their emotions as they navigate the challenges of balancing their academic and work performance. Based on the study, the level of emotional stress, anxiety, and depression is higher among students from state universities because of their obligations in academic and work responsibilities. However, higher education students frequently encounter specific hurdles that impact their performance and well-being Augusto-Landa, J. M., et al (2024). The impact on Skills and Development is significant in dynamic environments that require adaptability in the communication skills of students. It encompasses the range of their abilities and decision-making when it comes to conflict resolution and handling the team. The article by Tyurina, V. O., et al (2022) examines the skills of students when it comes to handling problems, decision making, and self-confidence. However, excessively leading a team may lead to burnout and uninvolvement. A Job Demand-Resources Theory refers to the job characteristics of working students influencing employees ' well-being and performance in their work. It also has an impact on mental health and motivation. This article examines the evidence on student well-being, burnout, engagement, student actions, proactive and self-defeating study practices, and student outcomes in higher education. Building on previous research that employed the Job Demands-Resources and Study Demands-Resources models to explore student well-being, we created the Study Demands-Resources (SD-R) theory to define

the numerous processes, mechanisms, and behaviors involved in student burnout and engagement Bakker, A. B., et al (2024).

3. Methodology

The study utilized a mixed-methods design integrating quantitative surveys and qualitative in-depth interviews for a comprehensive assessment of mental workload and emotional capacity of the higher education and working students in the National Capital Region (NCR). By integrating both approaches, this research has a comprehensive evaluation and contextual understanding of multifaceted challenges faced by the students and conducted in higher education colleges, institutions, and universities within NCR, which has a high concentration of higher education and working students

The data analysis utilized a Statistical Package for the Social Science (SPSS) for reliability testing and factor analysis while Analysis of Moment Structures (AMOS) is a statistical software that is applied to facilitates the estimation, assessment, and refinement of complex theoretical models involving multiple interrelated constructs with Structural Equation Modeling (SEM) is a useful tool for testing causal hypotheses that deals with observed variables and to avoid the complexity of latent variables and to have an insight into the relationship between academic and work demands and the impact on overall well-being. The analysis validates using the instruments, Cronbach's Alpha for the reliability of the measurements.

3.1 Data Collection

The collection of data focuses on the students who are working students and higher education students within NCR, with a population of 14,570. Using Raosoft's Sample size calculator with 95% confidence level, a margin of error of 0.5, and a response distribution of 50%, resulted in at least 385 respondents; this paper extended the sample size to 500 for more comprehensiveness. Utilization of convenience sampling methods is used in this study, and a structured questionnaire is used to determine the relationship of the variables by deploying online survey forms and conducting interviews with randomly selected respondents to have diverse insights. Informed consent forms were distributed to ensure the privacy and confidentiality of all participants. Reliability testing, Path Analysis, and Confirmatory Factor Analysis were conducted to modify the model.
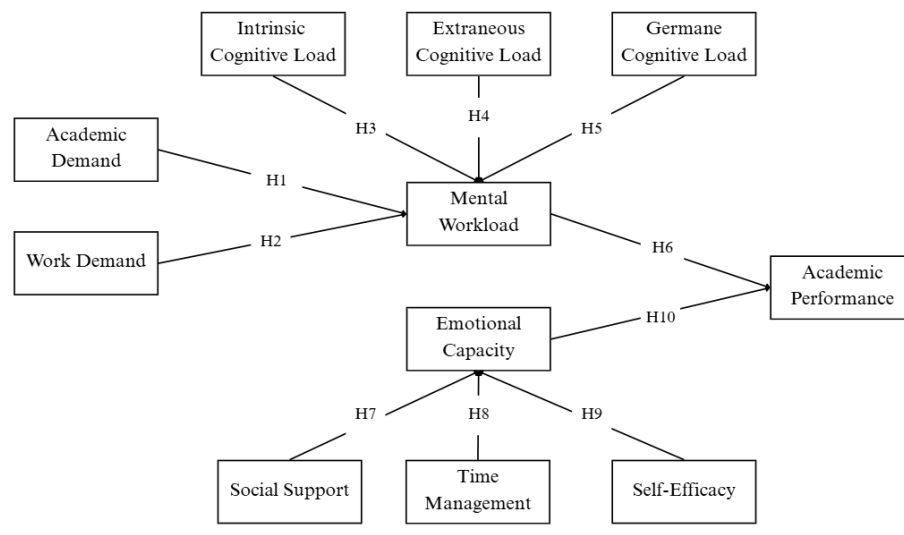
3.2 Theoretical Research Model

Figure 1. Theoretical Research Model based on Integrated Job Demand-Resources Theory and Cognitive Load Theory

Figure 1 shows the theoretical research model of this study. The theoretical research model is grounded on two theories, the Job Demand-Resources (JD-R theory and cognitive load theory. JD-R Theory depicts the various demands (academic and work) and resources (social support, time management, and self-efficacy) that influence

students' performance and well-being, while cognitive load theory presents an insight into how various mental efforts can affect the mental capacity of students to manage academic and work tasks. These theoretical research models guide the studies and concept the hypotheses.

3.3 Hypothesis
3.3.1 Mental Workload

Mental Workload (MW) refers to the cognitive effort required to handle multiple responsibilities simultaneously in the context of higher education and working students. Mental workload has been shown to influence academic demand and work demand, contributing to stress, cognitive strain, and emotional fatigue. The primary factors affecting mental workload include Academic Demand (AD) and Work Demand (WD). This factor only shows that allocating their mental effort toward academic and work performance requires students to balance multiple roles and manage their time effectively Knoster, K. C., & Goodboy, A. K. (2020). These efforts are further aided by the hypotheses H1 and H2.

Hypothesis 1 (H1): *Academic Demands increase the mental workload of higher education and working students.*
Hypothesis 2 (H2): *Work demands increase the mental workload of higher education and working students.*

Furthermore, hypotheses H7, H8, and H9 influence the students' mental workload (MW) on handling and processing cognitive challenges. Intrinsic Cognitive Load (ICL) adds strain, Galy et al. (2012). Extraneous Cognitive Load (ECL) leads to unnecessary hindrances. Germane Cognitive Load (GCL) demands extra comprehension, and these cognitive factors cause unwarranted constraints to overall well-being experienced by students Klepsch, M., & Seufert, T. (2020).

Hypothesis 7 (H7): *Intrinsic Cognitive Load increases the mental workload of higher education and working students.*
Hypothesis 8 (H8): *Extraneous Cognitive Load increases mental workload of higher education and working students.*
Hypothesis 9 (H9): *Germane Cognitive Load increases the mental workload of higher education and working students.*

3.3.2 Emotional Capacity

Emotional Capacity (EC) refers to an individual's ability to manage stress, regulate emotions, and maintain psychological resilience, which is crucial for the well-being and performance of higher education and working students. Social Support (SS), Time-Management (TM), and Self-efficacy (SE) strengthens the emotional resilience of the students allowing them to manage stress and maintain productivity Waddington (2023), these are supported by hypotheses H3, H4, and H5 that a strong support system and interventions are allowing the students to adapt to the pressure and stay motivated and enhances their ability to thrive in the demanding environment and roles.

Hypothesis 3 (H3): *Social Support increases the Emotional Capacity of higher education and working students.*
Hypothesis 4 (H4): *Time Management increases the Emotional Capacity of higher education and working students.*
Hypothesis 5 (H5): *Self-efficacy increases the Emotional Capacity of higher education and working students.*

3.3.3 Academic Performance

Academic Performance (AP) represents the measurable outcomes of a student's learning, typically reflected in grades, task completion, and overall scholastic achievement. For higher education and working students, academic success is often shaped by cognitive and emotional factors Lauron et al. (2022). Mental Workload (MW) and Emotional Capacity (EC) both influence academic performance. The relationship between these two allows for highlighting the need for cognitive and emotional capacity of higher education and working students, it also helps the institutions to create flexible strategies to help the students to balance out their responsibilities while optimizing student performance success.

Hypothesis 6 (H6): *Mental Workload increases the academic performance of higher education and working students.*
Hypothesis 10 (H10): *Emotional Capacity increases the academic Performance of higher education and working students.*

4. Results and Discussion

Table 1 presents a summary of demographics, highlighting the cognitive and emotional challenges that students and working students face in balancing academic responsibilities. The College of Engineering, particularly in the field of Science, Technology, Engineering, and Mathematics (STEM), is one experiencing heavy and overlapping workloads, which require management support from institutions. While studies as Senior-Year students have reported an increase in stress due to high demands from both academics and employment. This emphasizes the need for institutions to transition to flexible policies, as it leads to better financial accommodation. Lastly, females in Higher Education are in lower representation, which may suggest that future research may create gender related stress responses and strategies suggested by females for gender barriers in participation.

Table 1. Summary of Demographics

Characteristics	Value	Frequency	Percentage
Gender	Female	191	38.2%
	Male	248	49.6%
	Prefer not to say	61	12.2%
Age	16-18	5	1%
	19-21	70	14%
	22-25	236	47.2%
	26-29	165	33%
	30-32	19	3.8%
	33-35	5	1%
Area of Study	Working Student: College of Engineering	117	23.4%
	Working Student: College of Arts and Sciences	38	7.6%
	Working Student: College of Business and Management	35	7%
	Working Student: College of Nursing	12	2.4%
	Working Student: College of Education	15	3%
	Working Student: College of Law	9	1.8%
	Working Student: College of Agriculture	2	0.4%
	Working Student: College of Information Technology	20	4%
	Working Student: College of Architecture	7	1.4%
	Working Student: College of Fine Arts	10	2%
	Working Student: College of Medicine	11	2.2%

	Higher Education: College of Engineering	111	22.2%
	Higher Education: College of Arts and Sciences	7	1.4%
	Higher Education: College of Business and Management	14	2.8%
	Higher Education: College of Nursing	9	1.8%
	Higher Education: College of Education	10	2%
	Higher Education: College of Law	4	0.8%
	Higher Education: College of Agriculture	36	7.2%
	Higher Education: College of Information Technology	16	3.2%
	Higher Education: College of Architecture	4	0.8%
	Higher Education: College of Fine Arts	4	0.8%
	Higher Education: College of Medicine	6	1.2%
	Other	4	0.8%
Year Level	1st year	30	6%
	2nd year	49	9.8%
	3rd year	234	46.8%
	4th year	168	33.6%
	5th year	19	3.8%
Employment Status	Part-time	240	48%
	N/A	260	52%

4.1 Reliability Testing

Table 2. Cronbach's alpha

Latent Variables	Items	Cronbach's Alpha	Cut-Off	Remarks
Academic Demand	AD1	0.913	≥ 0.7	Excellent
	AD2			
	AD3			
	AD4			

	WD1			
Work Demand	WD2	0.895	≥ 0.7	Good
	WD3			
	WD4			
	MW1			
Mental Workload	MW2	0.943	≥ 0.7	Excellent
	MW3			
	MW4			
	ICL1			
Intrinsic Cognitive Load	ICL2	0.722	≥ 0.7	Acceptable
	ICL3			
Extraneous Cognitive Load	ECL 1	0.740	≥ 0.7	Acceptable
	ECL2			
Germane Cognitive Load	GCL1	0.855	≥ 0.7	Good
	GCL3			
	SS1			
Social Support	SS2	0.939	≥ 0.7	Excellent
	SS3			
	SS4			
	TM1			
Time Management	TM2	0.913	≥ 0.7	Excellent
	TM3			
	TM4			
	SE1			
Self-Efficacy	SE2	0.910	≥ 0.7	Excellent
	SE3			
	SE4			
Emotional Capacity	EC1	0.940	≥ 0.7	Excellent
	EC2			

	EC3			
	EC4			
Academic Performance	AP1	0.918	≥ 0.7	Excellent

Cronbach's alpha was calculated for each latent variable that as shown in Table 2; all of the constructs exceed the threshold of 0.7, which indicates that it is acceptable to good reliability. The variables such as Academic Demand (α = 0.913), Mental workload (α = 0.895), Social Support (α = 0.939), Time Management (α = 0.913), Self Efficacy (α = 0.910), Emotional Capacity (α = 0.940), and Academic Performance (α = 0.918) depicts an excellent reliability suggesting a strong coherence among the items while constructs such as Work Demand (α = 0.895), and Germane Cognitive Load (α = 0.855) demonstrate a good reliability meanwhile the Intrinsic Cognitive Load (α = 0.722), and Extraneous Cognitive Load (α = 0.740) reflected to be acceptable reliability. The consistency of these measurements supports the instruments and robustness that make the items reliably capture the items of academic demands that are associated with cognitive load and social and personal factors.

4.2 Structural Equation Model
Structural Equation Modeling (SEM) is used in this study to explore the complex relationships among academic, cognitive, emotional, and behavioral factors that influence working students' performance. The analysis is conducted using IBM SPSS AMOS version 26, which allows for the simultaneous estimation of measurement and structural components within the model .
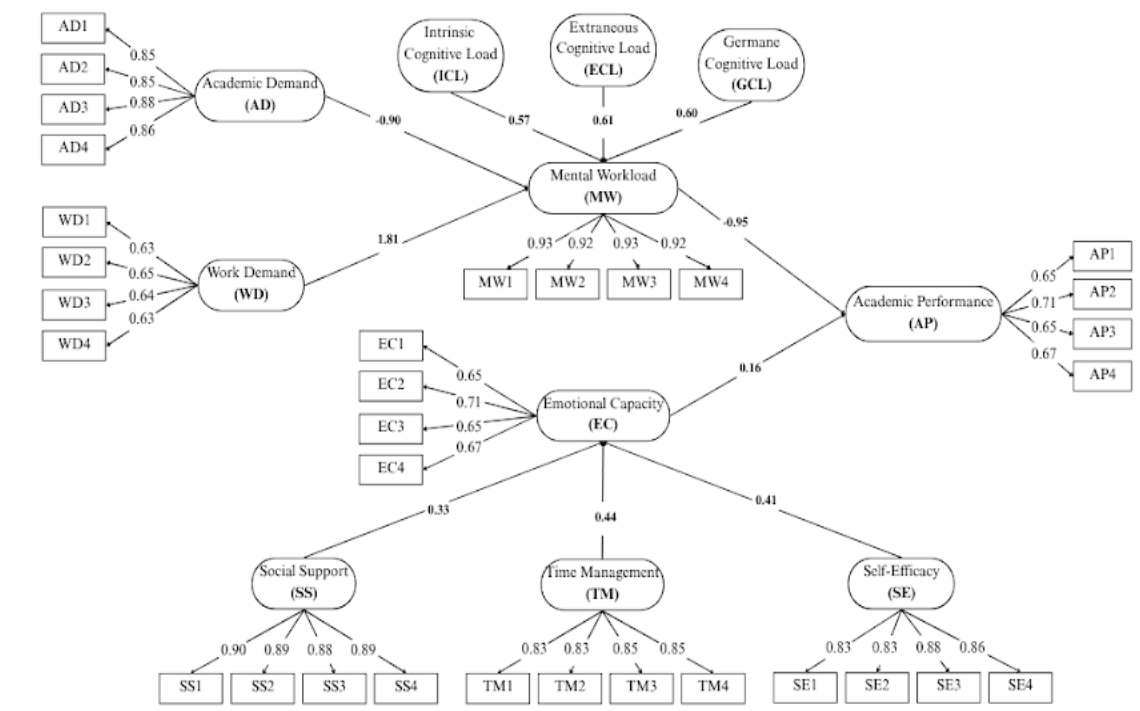

Figure 2. Structural Equation Modelling Results in AMOS

Figure 2 shows the results of the SEM in AMOS. The model includes 11 latent variables, which has 8 exogenous variables (Academic Demand, Work Demand, Intrinsic Cognitive Load, Extraneous Cognitive Load, Germane Cognitive Load, Social Support, Time Management and Self-Efficacy) meaning they are not influenced by other variables in the model and, 3 endogenous variables (Mental Workload, Emotional Capacity and Academic Performance), that are predicted by other constructs.
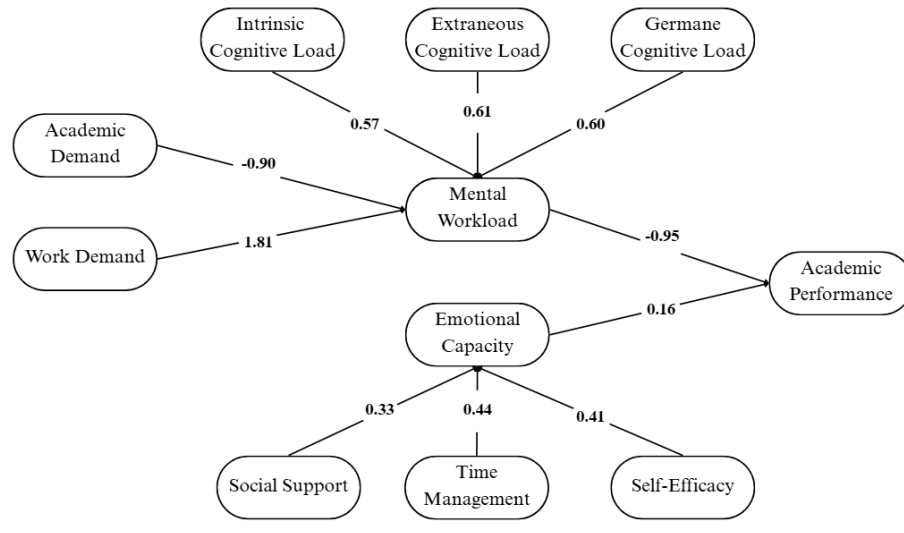
4.3 Modified Model

Figure 3. Final Model for analyzing the effect of balancing work with academic demand on a working student's academic performance

4.4.1 Model Fit

Table 3. Model Fit Indices - Modified Model

Model Fit	Value	Minimum Cut-off	Remarks
Chi-Square/df	3.397	>5	Acceptable
TLI	.906	≥ 0.90	Acceptable
CFI	.918	≥ 0.90	Acceptable
NFI	.899	≥ 0.90	Acceptable
RMSEA	.069	<0.07	Acceptable

Table 3 presents the model fit indices for the hypothesized SEM. The Chi-Square to degrees of freedom ratio (χ^2/df) was 3.397, indicating acceptable model parsimony. Key fit indices supported the model's adequacy: CFI = 0.918, TLI = 0.906, and IFI = 0.919, which are all above the recommended 0.90 threshold, suggesting good fit. Although NFI was slightly below ideal at 0.889, it remained within an acceptable range. The RMSEA was 0.069, indicating a close approximate fit. Overall, the model demonstrates acceptable fit and does not require major modifications.

5. Conclusion
This study examined the complex dynamics between academic and work demands, cognitive load, mental workload, emotional capacity, and academic performance among higher education and working students in the National Capital

Region (NCR). By integrating the Cognitive Load Theory and Job Demands–Resources (JD-R) Model, and applying Structural Equation Modeling (SEM), the study provided empirical evidence on how multiple role demands influence students' mental and emotional well-being, and ultimately, their academic outcomes.

The SEM results confirmed that Work Demand significantly increases Mental Workload ($\beta = 1.81$), while Academic Demand showed an unexpected negative effect ($\beta = -0.90$), suggesting that students may be more cognitively prepared for academic tasks than job-related responsibilities. Furthermore, components of Cognitive Load (Intrinsic, Extraneous, and Germane Load) contributed moderately to increased mental workload, reinforcing the idea that cognitive processing challenges are central to students' perceived strain.

Crucially, the study found that Mental Workload negatively affects Academic Performance ($\beta = -0.95$), supporting the theory that cognitive overload impairs academic efficiency. However, Emotional Capacity was positively predicted by key personal and social resources, namely Time Management ($\beta = 0.44$), Self-Efficacy ($\beta = 0.41$), and Social Support ($\beta = 0.33$). These variables served as vital buffers that enabled students to maintain emotional resilience under intense workload conditions.

These findings align with previous research on student well-being, reinforcing that while cognitive demands can strain mental functioning and academic output, the presence of adaptive coping resources significantly enhances emotional strength and can indirectly support performance. Despite the cognitive and emotional pressures, many students demonstrated adaptability and resilience, underscoring the role of self-regulation and external support in managing overlapping responsibilities. As such, educational institutions must recognize the dual burden of academic and employment commitments and implement responsive strategies that strengthen students' coping resources.

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Lynz Krisha Reyes is a fourth-year Industrial Engineering student at the Technological Institute of the Philippines – Quezon City. As a working student for the past three years, she has developed exceptional time management, adaptability, and perseverance—traits that have allowed her to balance both academic responsibilities and professional commitments successfully. She also demonstrates strong leadership and organizational skills. She has led multiple major academic projects, including *Project Feasibility, Ergonomics 1 and 2, Risk Management*, and is currently handling the *Design Project 1* thesis. She is known among peers and mentors for being resourceful, solution-oriented, and collaborative—qualities essential in the field of Industrial Engineering.

Maricar M. Navarro. holds the esteemed titles of ASEAN Engineer (AE) and Professional Industrial Engineer (PIE), accredited by the ASEAN Federation of Engineering Organisations (AFEO) and Philippine Institute of Industrial Engineers (PIIE). She currently serves as a Professor in both Undergraduate and Graduate School Program of Technological Institute of the Philippines, bringing over 18 years of combined experience in industry, academia, and research. Her expertise spans optimization of production processes, facility layout design, warehouse operations, and service delivery. Dr. Navarro's current research interests focus on financial optimization and decision-making in operations research. She earned both her master's and Ph.D. in Industrial Engineering from MAPUA University. As an associate member of the National Research Council of the Philippines (NRCP) and member of PIIE, Dr. Navarro contributes significantly to advancing research initiatives and professional standards in Industrial engineering and related fields. Her dedication and expertise make her a pivotal figure in both academic circles and national research endeavors.