

Ateneo de Manila University

Archium Ateneo

Leadership and Strategy Faculty Publications

Leadership and Strategy Department

2026

Filipino Teachers' Grit and Organizational Resilience During the COVID-19 Pandemic

Jyro B. Triviño

Moses G. Manalang

Follow this and additional works at: <https://archium.ateneo.edu/leadership-and-strategy-faculty-pubs>



Part of the [Industrial and Organizational Psychology Commons](#), [Organizational Behavior and Theory Commons](#), [Strategic Management Policy Commons](#), and the [Teacher Education and Professional Development Commons](#)

Filipino Teachers' Grit and Organizational Resilience During the COVID-19 Pandemic

Jyro B. Triviño*
Ateneo de Manila University

Moses G. Manalang
Far Eastern University Cavite

— Review of —
**Integrative
Business &
Economics**
— Research —

ABSTRACT

This study explores the relationship between employee grit and organizational resilience, focusing on perceptions from Filipino teachers during the COVID-19 pandemic. Utilizing a quantitative survey, data from 108 teaching faculty from a Southern Luzon university were analyzed using Spearman correlation to identify potential associations between these constructs. Findings reveal significant but weak to moderate correlations between dimensions of grit and facets of organizational resilience. Notably, adaptability to situations emerged as the most substantial grit component linked to organizational resilience, indicating its critical role in fostering organizational adaptability and planning strategies during uncertain times. The results suggest that individuals with high grit may contribute to institutionalizing organizational resilience practices. Organizations are encouraged to proactively assess employee grit and organizational resilience, leveraging these attributes to maintain operational stability and foster employee well-being during crises.

Keywords: Grit, organizational resilience, adaptive capacity, crisis management.

Received | Revised 2025 | Accepted 2025

1. INTRODUCTION

Both organizations and their employees are not immune to the effects of a global crisis, and its impact on their operations should always be closely monitored (Tibon, 2022). While economic activity manifested a positive signal of recuperation toward the turn of 2020, hopes were quickly sunk by the coronavirus disease (COVID-19), which has stretched into a worldwide pandemic (Luning and Ledford, 2022; Triviño, 2025). It disrupted regional and global supply chains, trade, and education, significantly impacting vulnerable developing countries like the Philippines and its local workforce (Kolachi *et al.*, 2021).

Demonstrating grit during uncertain conditions keeps employees mentally and physically intact (Medina, 2024). Similarly, organizations should also be resilient in facing onerous challenges (Campos, 2024). They must adapt and recover from a crisis to keep operations as usual and the local economy alive (Saavedra *et al.*, 2024).

Filipino teachers became COVID-19 heroes, displaying remarkable adaptability as they quickly pivoted from traditional classroom settings to online learning platforms despite limited resources and training (De Gracia and Triviño, 2024). Many educators, particularly in rural areas, faced significant challenges, including unreliable internet connectivity, inadequate technological infrastructure, and the absence of proper home office setups, yet continued to provide quality education through innovative approaches

such as module delivery systems, mobile phone-based instruction, and community radio programs (Tanucan *et al.*, 2022). Their dedication often extended beyond teaching, providing emotional support to students struggling with isolation and uncertainty while simultaneously managing their pandemic-related anxieties (Selvik and Herrebrøden, 2024).

The financial and emotional toll on Filipino teachers was substantial, with many reporting increased workloads, extended working hours, and the financial burden of purchasing their own equipment and internet subscriptions (Collado *et al.*, 2021). Despite these hardships, Filipino educators demonstrated their resilience and commitment to professional growth during these adverse circumstances, effectively transforming the crisis into an opportunity for personal and pedagogical development.

The main research question focused on how Filipino teachers' grit and organizational resilience correlate in a university located in Southern Luzon, Philippines, during the COVID-19 pandemic. We determined the degree of individual grit and analyzed the degree of organizational resilience as perceived by the teachers.

In conducting this study, we wanted to provide insights to school administrators in crisis by understanding their employees' behavior to check what makes their teachers vulnerable and the factors affecting their grit and resilience. This will give them an idea of how to capacitate their human capital in difficult times. Our research also guides educational institutions in ensuring their academic operations are resilient by ensuring the appropriate adaptive capacity and planning strategy to overcome uncertainties and challenges.

2. REVIEW OF RELATED LITERATURE

Duckworth *et al.* (2007) defined grit as perseverance and passion for long-term goals, which are instrumental in work and non-work situations (Eskreis-Winkler *et al.*, 2014). Scholars have criticized grit regarding nomological validity and ability to predict success and performance (Crede, 2018), but its original proponent established its predictive validity.

Researchers attempted to link grit with other personality constructs similar to conscientiousness (Butz *et al.*, 2019). When it was defined as the consistency of interest and perseverance of effort, it was considered a novel concept since its introduction in psychology (Duckworth and Quin, 2009). However, the debate continues to settle on its ability to predict success and performance in the field of education (Pate *et al.*, 2017).

A seminal study on adults' educational attainment, undergraduate grade point average, cadets' retention in the US military academy, and ranking in a national spelling bee found that across these studies, individual differences in grit accounted for significant incremental variance in success outcomes over and beyond that explained by IQ, to which it was not positively related (Duckworth *et al.*, 2007)

The perseverance of effort in the domain of grit substantially correlates with conscientiousness compared to its consistency of interest or passion (Rimfeld *et al.*, 2016). This means that the overall grit (perseverance and passion) may not be a repackaging of the conscientiousness construct, as it falls short of the domain of passion.

Grit is often associated with resilience characteristics such as flexibility and willingness to adapt, which keep high-grit individuals focused on purpose-driven goal

accomplishment (Jordan *et al.*, 2019). Grittier individuals are more likely to have a growth mindset at baseline and are more inclined to perceive impediments and challenges as growth opportunities. This suggests that grit manifests resilience on an individual and personal level.

While grit elicits employee resilience, less attention is given to what makes organizations succeed despite disaster. Many organizational leaders agree with the need to improve organizations' resilience, but they lack the time or resources to address the problem (Lee *et al.*, 2013). This indicates that, aside from resilience emanating from employee grit, the need to investigate whether it could possibly relate to organizational resilience is apparent. Organizations are characterized as resilient if they are (a) just getting by, (b) getting back to the status quo after experiencing adversity, or (c) getting ahead through consistent improvement or high performance, and this thought aligns with the concept of survival, recovery, and thriving (Ledesma, 2014). This means that, just like employees, most of the individual instincts to surpass a crisis are also manifested by organizations through organizational resilience.

Lee *et al.* (2013) developed a tool for comparing and measuring organizational resilience, stating that resilience is a multidimensional, sociotechnical phenomenon that addresses how people, individuals, or groups manage uncertainty. They stressed that discourse about resilience characterizes it using notions of bouncing back, robustness, absorption, surviving, and thriving. Organizational resilience is a continuously moving target contributing to performance during business-as-usual and crisis situations (Duckworth and Quinn, 2009). In other words, organizational resilience entails overall preparedness to face uncertainties that negatively impact its operations, ensuring it is technically competent, its human capital is mobile, and its innovative strategies are in place.

3. RESEARCH FRAMEWORK

Institutional theory was used as the theoretical underpinning of this study because it provides a rich and complex view of organizations. Organizations are influenced by normative pressures, sometimes from external sources such as a crisis and other times from within the organization, like employee behavior (Zucker, 1987). Under some conditions, these pressures lead the organization to be guided by legitimate elements such as resiliency, which often direct attention away from task performance. Ensuring the "organizations as institutions" premise, Zucker (1987) argues that acts like being gritty and structures embedded in organizations are more readily institutionalized. Hence, organizations are essential sources of institutionalizing new actions like organizational resilience. Following the institutional point of view that actions or behaviors of individuals embedded in organizations can quickly be institutionalized, we assumed that employees with high grit and who manifest more resilience than others could be institutionalized by their organization and be a source of organizational resilience.

Grittier individuals are more likely to have a growth mindset at baseline. They are more inclined to perceive impediments and challenges as growth opportunities (Jordan *et al.*, 2019) and act for the organization's benefit during difficult times. We proposed our null hypothesis from this: *"There is no correlation between Filipino teacher's grit and organizational resilience as perceived by the employees during the COVID-19 pandemic."*

4. METHODOLOGY

4.1 Sampling design

The study sample consists of full-time and part-time teaching faculty from a university in Southern Luzon, Philippines. The data source was identified by reviewing the university's human resource database, which contained a complete and updated roster of all active teaching faculty for the academic year 2021-2022. This was the basis for the sampling frame, containing demographic information, the highest educational attainment, and the current teaching level.

During the COVID-19 pandemic, they were asked to complete a self-administered survey via Google Forms. A single-stage sampling procedure was adopted because a complete list of full-time and part-time teachers was available and used as a sampling frame to select survey respondents (Creswell and Creswell, 2018). Hair *et al.* (2014) suggested that the minimum sample size is 100 when considering models containing five or fewer constructs.

The data collection process was implemented in multiple phases to maximize response rates. Initially, personalized email invitations containing the Google Forms link and participant information sheet were sent to 120 randomly selected participants. Follow-up reminder emails were sent after 48 hours and again after 96 hours to non-respondents. The survey remained open for five days, during which only 108 complete responses were returned, yielding a response rate of 90%. This study upheld ethical guidelines by ensuring voluntary consent from the respondents. After collecting the data, the participant identifiers were kept for three months and deleted after creating the first manuscript draft. Anonymized data were stored indefinitely thereafter.

4.2 Measurement and Instrumentation

The Triarchic Model of Grit Scale (TMGS) was adopted to collect grit scores. Unlike other grit studies that raised the reliability of grit measures, TMGS estimates were higher (α perseverance = 0.75 to 0.84; α consistency = 0.60 to 0.84; α adaptability = 0.88) (Datu *et al.*, 2017). On the other hand, the organizational resilience measurement tool developed by Lee *et al.* (2013) was used to measure overall organizational resilience. This earned a Cronbach's alpha of 0.950.

4.3 Data analysis

Bivariate correlations were used to test all seven variables, namely perseverance of effort, consistency of interest, adaptability to situation, overall grit, organizational adaptability, organizational planning, and overall organizational resilience, using IBM SPSS Statistics version 23. Data were run using the parametric Spearman correlation coefficients and $p =$ values. According to Myers and Sirois (2006), Spearman correlation coefficient tests are more robust, especially when data are non-normal. Spearman's rho, which is typically denoted as r_s , is also a way to adapt r to deal with ordinal relationships such as the Likert scale (Baguley, 2012).

5. RESULTS AND DISCUSSIONS

Table 1 presents a demographic profile of 108 respondents. The average age of the respondents is 34 years, with an average teaching experience of 10 years. The gender distribution is relatively balanced, with a slightly higher percentage of female respondents (52.78%) than male respondents (47.22%). The majority of the respondents hold advanced degrees, with more than

half (56.48%) possessing a Master's degree, while 32.40% have a Bachelor's degree, and 11.12% hold doctoral degrees. This distribution suggests a well-educated faculty body, with nearly two-thirds of respondents pursuing education beyond the undergraduate level. The respondents are distributed across three academic ranks, with Assistant Professors forming the largest group (40.74%), followed by Instructors (37.03%) and Associate Professors (22.23%). Notably, there are no Full Professors in the sample. This distribution, combined with the average age and years of teaching experience, suggests a relatively young faculty body still progressing through academic ranks.

Table 1 : Demographic Profile of Respondents

	Frequency	Percentage	Mean
Age (<i>in years</i>)	108		34
Length of teaching experience (<i>in years</i>)	108		10
Gender			
<i>Male</i>	51	47.22 %	
<i>Female</i>	57	52.78 %	
Highest Educational Attainment			
<i>Bachelor's degree</i>	35	32.40 %	
<i>Master's degree</i>	61	56.48 %	
<i>Doctor's degree</i>	12	11.12 %	
Teaching level			
<i>Instructor</i>	40	37.03 %	
<i>Assistant Professor</i>	44	40.74 %	
<i>Associate Professor</i>	24	22.23 %	
<i>Full Professor</i>	0	0 %	

perseverance of effort shows significant positive correlations with several key variables. It strongly correlates with overall grit ($r = 0.657$, $p < 0.001$), suggesting that perseverance of effort is a crucial component of grit. It also shows moderate correlations with adaptability to a situation ($r = 0.376$, $p < 0.001$) and planning strategy ($r = 0.304$, $p < 0.01$), indicating that individuals with higher perseverance tend to be more adaptable and better at planning.

Consistency of interest demonstrates relatively weak correlations with most variables, with significant but modest relationships with adaptability to a situation ($r = -0.330$, $p < 0.001$) and overall grit ($r = 0.272$, $p < 0.01$). Interestingly, the negative correlation with adaptability suggests that higher consistency of interest might reduce one's adaptability to different situations. Adaptability to a situation indicates strong positive correlations with overall grit ($r = 0.677$, $p < 0.001$) and moderate correlations with planning strategy ($r = 0.453$, $p < 0.001$) and overall organizational resilience ($r = 0.381$, $p < 0.001$). This suggests that adaptability is a key factor in individual grit and organizational resilience. Overall grit reveals a significant positive correlation with all variables except consistency of interest. Its strongest relationships are with perseverance of effort and adaptability to a situation, while showing moderate correlations with planning strategy ($r = 0.336$, $p < 0.001$) and overall organizational resilience ($r = 0.304$, $p < 0.01$).

Adaptive capacity has particularly strong correlations with planning strategy ($r = 0.742$, $p < 0.001$) and overall organizational resilience ($r = 0.946$, $p < 0.001$). Adaptive capacity is the most crucial component of organizational resilience and is closely tied to planning capabilities. Planning strategy strongly correlates with adaptive capacity and overall

organizational resilience ($r = 0.903, p < 0.001$). This reveals that planning is fundamental to adaptability and organizational resilience, bridging individual and organizational capabilities. Overall, organizational resilience demonstrates its strongest correlations with adaptive capacity and planning strategy while maintaining moderate positive correlations with perseverance of effort, adaptability to situations, and overall grit. This shows that organizational resilience is a complex construct that relies on individual characteristics and organizational capabilities.

Bivariate Spearman correlations among the seven variables for the 108 sample respondents are presented in Table 2 below.

Table 2: Bivariate Spearman Correlations Table

		1	2	3	4	5	6	7
1. Perseverance of effort	Spearman's rho	—						
	p-value	—						
2. Consistency of interest	Spearman's rho	-0.140	—					
	p-value	0.149	—					
3. Adaptability to situation	Spearman's rho	0.376 ***	-0.330 ***	—				
	p-value	0.000	0.000	—				
4. Overall grit	Spearman's rho	0.657 ***	0.272 **	0.677 ***	—			
	p-value	0.000	0.004	0.000	—			
5. Adaptive capacity	Spearman's rho	0.179	-0.118	0.281 **	0.236 *	—		
	p-value	0.064	0.223	0.003	0.014	—		
6. Planning strategy	Spearman's rho	0.304 **	-0.201 *	0.453 ***	0.336 ***	0.742 ***	—	
	p-value	0.001	0.037	0.000	0.000	0.000	—	
7. Overall organizational resilience	Spearman's rho	0.251 **	-0.155	0.381 ***	0.304 **	0.946 ***	0.903 ***	—
	p-value	0.009	0.110	0.000	0.001	0.000	0.000	—

Note: * $p < .05$, ** $p < .01$, *** $p < 0.000$

Based on the first objective to determine the degree of individual grit as perceived by Filipino teachers during the COVID-19 pandemic, result shows a significant but weak positive association between the perseverance of effort and adaptability to situation ($r(s)=0.376, p=0.000$), between consistency of interest and overall grit ($r(s)=0.272, p=0.004$), significant but weak negative association between consistency of interest and adaptability to situation ($r(s)=-0.330, p=0.000$). In addition, there is a significant and strong positive association between perseverance of effort and overall grit ($r(s)=0.657, p=0.000$) and between adaptability to situation and overall grit ($r(s)=0.677, p=0.000$).

Based on the second objective, to analyze the degree of organizational resilience as perceived by Filipino teachers during the COVID-19 pandemic, the results reveal a significant and strong positive association between adaptive capacity and planning strategy ($r(s)=0.742, p=0.000$) as perceived by employees. Furthermore, there is a significant and very strong association between adaptive capacity and organizational resilience ($r(s)=0.946, p=0.000$) and between planning strategy and organizational resilience ($r(s)=0.903, p=0.000$).

For the main hypothesis, the result revealed nine (9) significant correlations between grit and organizational resilience, rejecting our null hypothesis. Below are our findings of the significant correlations presented in the order of the variable number:

- There was a statistically significant weak positive correlation between Filipino teachers' perception of their perseverance of effort (1) and their perception of their organization's planning strategy ($r(s)=0.304$, $p=0.001$) during the COVID-19 pandemic;
- There was a statistically significant weak positive correlation between Filipino teachers' perception of their perseverance of effort (1) and their perception of their organizational resilience ($r(s)=0.251$, $p=0.009$) during the COVID-19 pandemic;
- There was a statistically significant weak negative correlation between Filipino teachers' perception of their consistency of interest (2) and their perception of their organization's planning strategy ($r(s)= -0.201$, $p=0.037$) during the COVID-19 pandemic;
- There was a statistically significant weak positive correlation between Filipino teachers' perception of their adaptability to situations (3) and their perception of their organization's adaptive capacity ($r(s)=0.281$, $p=0.003$) during the COVID-19 pandemic;
- There was a statistically significant moderate positive correlation between Filipino teachers' perception of their adaptability to situations (3) and their perception of their organization's planning strategy ($r(s)=0.453$, $p=0.000$) during the COVID-19 pandemic;
- There was a statistically significant weak positive correlation between Filipino teachers' perception of their adaptability to situations (3) and their perception of their organizational resilience ($r(s)=0.381$, $p=0.000$) during the COVID-19 pandemic;
- There was a statistically significant weak positive correlation between Filipino teachers' perception of their overall grit (4) and their perception of their organization's adaptive capacity ($r(s)=0.236$, $p=0.014$) during the COVID-19 pandemic;
- There was a statistically significant weak positive correlation between Filipino teachers' perception of their overall grit (4) and their perception of their organization's planning strategy ($r(s)=0.336$, $p=0.000$) during the COVID-19 pandemic;
- There was a statistically significant weak positive correlation between Filipino teachers' perception of their overall grit (4) and their perception of their organizational resilience ($r(s)=0.304$, $p=0.001$) during the COVID-19 pandemic.

The results of the multiple regression analysis in Table 3 indicate that the grit dimensions of *Perseverance*, *Consistency*, and *Adaptability* are not significant predictors of *Adaptive Capacity*, a dimension of *Organizational Resilience*.

Table 3 : Multiple Regression Result of Grit Dimensions versus Adaptive Capacity
95% CI

	Beta	SE	95% CI		<i>t</i>	<i>p</i>
			LL	UL		
Constant	2.52	0.72	1.09	3.95	3.49	0.00
Perseverance	0.11	0.13	-0.14	0.37	0.87	0.38
Consistency	-0.04	0.09	-0.22	0.14	-0.45	0.65

Adaptability	0.18	0.12	-0.05	0.41	1.58	0.12
--------------	------	------	-------	------	------	------

Dependent Variable: Adaptive Capacity

The results of the multiple regression analysis in Table 4 indicate that the grit dimension of *Perseverance* and *Adaptability* is significant at $p \leq 0.05$. This means that both grit dimensions are predictors of *Planning*, which is another dimension of *Organizational Resilience*. This is not true for *Consistency*, which is not a significant predictor of *Planning*.

These findings suggest that while individual persistence and flexibility contribute to an organization's planning capabilities, maintaining consistent approaches may not enhance its strategic planning processes for building resilience.

Table 4 : Multiple Regression Result of Grit Dimensions versus Planning
95% CI

	Beta	SE	95% CI		<i>t</i>	<i>p</i>
			LL	UL		
Constant	1.04	1.04	-0.57	2.65	1.28	0.20
Perseverance	0.26	0.26	-0.03	0.55	1.80	0.08**
Consistency	-0.07	-0.07	-0.27	0.13	-0.68	0.50
Adaptability	0.41	0.41	0.15	0.67	3.13	0.00*

Dependent Variable: Planning. * $p < .05$; ** $p < .10$

5. CONCLUSION AND RECOMMENDATIONS

While extant literature investigated the link of grit with business-related performance variables, such as job satisfaction, firm performance, and workplace spirituality, our study is a novel exploratory research that attempted to link grit with another construct – organizational resilience in the context of an educational institution. As observed, there is a significant association between selected Filipino teachers' perception of their individual grit and their organizational resilience. However, it ranges only from weak to moderate.

In line with Crede's (2018) findings, our study also reveals that perseverance of effort is strongly associated with overall grit compared to consistency of interest. Further, the adaptability to the situation strongly correlates with overall grit, which supports similar findings in Datu *et al.* (2017) triarchic model. This suggests that the higher the grit of an individual, the higher their perseverance, effort, and adaptability to situations. This also confirms that high-grit individuals can sustain their efforts and become resilient in difficult times, as suggested by Jordan *et al.* (2019). A significant correlation between grit and organizational resilience, amid weak to moderate levels, suggests a possible alignment with the institutional theory that individual behavior can easily be institutionalized at the organizational level (Zucker, 1987).

This study answered whether the extent of the correlation between grit and organizational resilience, as perceived by Filipino teachers, is weak to moderate but significant. We provided implications to university administrators for observing their employees in terms of their behavior in times of crisis. This will enable them to determine who among their employees perceives themselves as vulnerable, gritty, and resilient, and eventually arrive

at a decision for appropriate action to sustain their human capital under challenging situations. Furthermore, organizations should also continuously assess their organizational resilience with or without a crisis. They should always ensure that critical functions are operational in good and bad times.

In general, the preceding items reject our null hypothesis and accept the alternative that there is a significant correlation between employee grit and organizational resilience as perceived by our selected Filipino teachers. During the COVID-19 pandemic, their perception of their individual grit ranged from weak (i.e., consistency of interest) to strong (i.e., perseverance of effort and adaptability to situations). Moreover, their perception of their organizational resilience was very strong both in terms of their organizations' adaptive capacity and planning strategy.

Although the seven variables show correlations, these are also general measures. Precise measures are needed to assist managers if this is to be replicated in other organizational contexts. Future research could also be done to create objective measures.

ACKNOWLEDGEMENT

The researchers would like to acknowledge Ateneo de Manila University for the conference presentation support that was extended to them for the SIBR Osaka Conference 2025. We would also like to thank in advance the anonymous reviewer for the valuable comments and suggestions for improving this paper.

REFERENCES

- [1] Baguley, T. (2012). *Serious stats a guide to advanced statistics for the behavioral sciences*. *Serious Stats* (First). Hampshire, UK: Palgrave Macmillan.
- [2] Butz, N. T., Stratton, R., Trzebiatowski, M. E., & Hillery, T. P. (2019). Inside the hiring process: how managers assess employability based on grit, the big five, and other factors. *International Journal of Business Environment*, *10*(4), 306–328.
- [3] Campos, K. P. (2025). Entrepreneurial bricolage's contingent effect on entrepreneurial leadership and sustainability performance: evidence from small firms in Davao region, Philippines. *Review of Integrative Business and Economics Research*. *14*, (2), 152-162.
- [4] Collado, Z. C., Concha, C. B. A., & Orozco, N. M. I. G. (2021). Teaching in Transition: How Do Filipino Teachers Face the Migration to Cyberspace amid the Pandemic? *Computers in the Schools*, *38*(4), 281–299.
- [5] Credé, M. (2018). What shall we do about grit? A critical review of what we know and what we don't know. *Educational Researcher*, *47*(9), 606–611.
- [6] Creswell, J. W., & Creswell, J. D. (2018). *Research and design qualitative, quantitative and mixed methods approaches*. *SAGE Publications, Inc.* (5th ed.). Thousand Oaks, California: SAGE Publications, Inc.
- [7] Datu, J. A. D., Yuen, M., & Chen, G. (2017). Development and validation of the triarchic model of grit scale (TMGS): Evidence from Filipino undergraduate students. *Personality and Individual Differences*, *114*, 198–205.
- [8] De Gracia, E. P., & Triviño, J. B. (2024). Pricing strategies and production capacity of buffalo dairy hub: Key determinants of reseller customer experience amid covid-19, *Philippine Academy of Management E-Journal*, *7*(2), 145-157.
- [9] Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit:

- Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, 92(6), 1087–1101
- [10] Duckworth, A. L., & Quinn, P. D. (2009). Development and validation of the short grit scale (grit-s). *Journal of Personality Assessment*, 91(2), 166–174.
- [11] Eskreis-Winkler, L., Shulman, E. P., Beal, S. A., & Duckworth, A. L. (2014). The grit effect: predicting retention in the military, the workplace, school and marriage. *Frontiers in Psychology*, 5(36).
- [12] Hair, Jr., J., Black, W., Babin, B., & Anderson, R. (2014). *Multivariate data analysis. Pharmaceutical quality by design: A practical approach* (7th ed.). Edinburgh Gate, Harlow: Pearson Prentice Hall.
- [13] Jordan, S. L., Ferris, G. R., Hochwarter, W. A., & Wright, T. A. (2019). Toward a work motivation conceptualization of grit in organizations. *Group and Organization Management*, 44(2), 320–360.
- [14] Kolahchi, Z., De Domenico, M., Uddin, L. Q., Cauda, V., Grossmann, I., Lacasa, L., Grancini, G., Mahmoudi, M., & Rezaei, N. (2021). COVID-19 and its global economic impact. *Advances in Experimental Medicine and Biology*, 1318, 825–837.
- [15] Ledesma, J. (2014). Conceptual frameworks and research models on resilience in leadership. *SAGE Open*, 4(3).
- [16] Lee, A. V., Vargo, J., & Seville, E. (2013). Developing a tool to measure and compare organizations' resilience. *Natural Hazards Review*, 14(1), 29–41.
- [17] Luning, C. R., & Ledford, A. (2022). The role of leaders in enabling organizational resilience by generating a culture of grit. *Future of Business and Finance*, 153-172.
- [18] Medina, M. S. G. (2024). Perceived stress and life satisfaction among university students. *Review of Integrative Business and Economics Research*. 13, (1), 144-157.
- [19] Myers, L., & Sirois, M. J. (2006). Spearman correlation coefficients, differences between. In *Encyclopedia of Statistical Sciences* (pp. 1–2). John Wiley & Sons, Inc.
- [20] Pate, A. N., Payakachat, N., Kristopher Harrell, T., Pate, K. A., Caldwell, D. J., & Franks, A. M. (2017). Measurement of grit and correlation to student pharmacist academic performance. *American Journal of Pharmaceutical Education*, 81(6), 1–8.
- [21] Rimfeld, K., Kovas, Y., Dale, P. S., Plomin, R., Centre, D. P., Genetics, B., & Sciences, H. (2016). True grit and genetics: predicting academic achievement from personality. *Journal of Personal Social Psychology*, 111(5), 780–789.
- [22] Saavedra, L. L. M., Uy, C., & Canoy, L. M. (2024). Effects of crisis-driven reduction measures on business process outsourcing employees' motivation, performance, and retention. *Review of Integrative Business and Economics Research*. 13, (4), 281-299.
- [23] Selvik, S. & Herrebrøden, M. K. (2024). Teacher experiences under covid-19 pandemic school reopening periods: A window of opportunity for adapted education. *Teaching and Teacher Education*, 139, 104445.
- [24] Tanucan, J. C. M., Negrido, C. V., & Malaga, G. N. (2022). Digital leadership of school heads and job satisfaction of teachers in the Philippines during the pandemic.
- [25] *International Journal of Learning, Teaching and Educational Research*, 21(10), 1–18.

- [26] Tibon, M. V. P. (2022). Organizational agility among selected SMEs in the Philippines during the Covid-19 Pandemic: genesis and implications. *Review of Integrative Business and Economics Research*. 11, (1), 253-259.
- [27] Triviño, J. B. (2025). Entrepreneurs' propensity for corruption: A theoretical framework. *Journal of Business, Ethics and Society*, 5(1), 59-71.
- [28] Zucker, L. G. (1987). Institutional theories of organization. *Annual Review of Sociology*. 13, 443-464.