



Reframing the workplace in a VUCA world: Teaching assistants and their influence on teachers' efficiency and self-efficacy

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ABSTRACT

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The volatile, uncertain, complex, and ambiguous (VUCA) educational landscape demands educators to embrace innovative practices and cater to diverse student needs. This study explores the influence of teaching assistants (TAs) on teachers' efficiency and self-efficacy. A convergent mixed methods design was employed, with data collected from 100 teachers with TAs in the Philippines through surveys and interviews. The findings reveal that TAs significantly improve teachers' workplace efficiency and self-efficacy. Teachers value their TAs' ability to reduce workload, allowing them to better address student needs. However, challenges emerged regarding TAs' preparedness for abrupt academic changes. This study contributes to understanding the multifaceted dynamics between TAs and teachers. It suggests that well-trained TAs enhance teachers' efficiency and self-efficacy, potentially leading to improved educational outcomes. By enhancing the effectiveness of TAs, educational institutions empower teachers and contribute to a more resilient educational environment. Further research is recommended to explore the specific roles of TAs across disciplines and to optimize their support for teachers in a VUCA world.

Contribution/Originality: This study contributes by generating findings on the influence of teaching assistants (TAs) on teachers' efficiency and self-efficacy in a volatile, uncertain, complex, and ambiguous (VUCA) workplace, especially in multifaceted and diverse academic dynamics, thus aiding educators in augmenting the advantages of TAs to improve efficiency in instruction, extension, research, and production.

1. INTRODUCTION

Education serves as the springboard for societal progress, yet its global landscape is undergoing unparalleled transformations, contributing to a massive workload for education systems worldwide. In this current situation, the demand for quality education that adheres to the United Nations' Sustainable Development Goal 4 (SDG 4) expanded exponentially by the advanced use of technology, diverse learning needs, and evolving socio-economic dynamics, which are at the front line of sustainable cities and communities (SDG 11). In the Philippines, today's education signifies the burden and challenges that characterize the massive workload across disciplines. From addressing discrepancies to supply regarding curriculum demands, educators are confronted with an ever-growing array of responsibilities to cater for the needs of the teaching and learning process to survive in the unpredictable scope of education.

In the midst of numerous challenges, the present condition of education provides limited insights into how a lone virus can disrupt our society. The COVID-19 pandemic made this evident through loss of employment, financial pressures (Villarama, Santos, Adsuara, Antalan, & Gundran, 2022) and uncertain and turbulent environments, revealing organizational unpreparedness to swiftly adapt and respond (Araújo, Reis, & Morais, 2021). It is described as a crisis similar to a natural disaster catching people and organizations off guard (Bratianu & Bejinaru, 2021). With the new reality, organizations have the flexibility to employ various decision-making strategies to steer their trajectories toward goal achievement, foster innovation (Araújo et al., 2021), and undergo transformation and adjustment to survive a volatile, uncertain, complex, and ambiguous (VUCA) world. The fast changes gave rise to a VUCA world, underscoring the necessity for individuals, organizations, and societies to prepare for a realm characterized by abrupt changes, unpredictability, and complexity (Niemczyk, 2023).

In a VUCA world, numerous gaps within the higher education environment exert pressure on universities and educational institutions (Slaughter, Rodgers, & Henninger, 2023). In different countries, academic settings have no control on any possible problems that may arise during the academic year (Akinoso, 2015). With global strains, education institutions push to adopt new practices and activities (Niemczyk, 2023) provide more inclusive types of assistance to reduce inequalities (SDG 10), meet the need for teachers with different sets of skills, knowledge and attitudes (Binti Ali & Abd Latif, 2023) and cater for the variety of learners that lead schools to increase the employment of teaching assistants (TAs) (Butt, 2018). The use of TAs is commonly employed in various education systems (Hodgen, Adkins, & Ainsworth, 2023). Since, human capabilities are a major resource for organizations such as schools (Saydam & Yilmaz, 2023) and are essential elements of the system (Kaleli, 2021; Tanguay & Many, 2022), teachers' positive sense of efficacy are essential to confront and manage new and challenging tasks with dedication (Vosough Matin, 2023) and their positive self-efficacy mirrors professional success and students' performance in the education system (Lohr et al., 2021).

Research points to the salient advantages of having TAs if deployed effectively (Jackson, Sharma, Odier-Guedj, & Deppeler, 2021). When school leaders continue to face setbacks, disruptions, and challenges in a volatile, uncertain, complex, and ambiguous world (Binti Ali & Abd Latif, 2023) the benefits of TAs must be understood and considered. Thus, this study (1) measures the level of influence of TAs on teachers' efficiency and self-efficacy; (2) differentiates teachers' efficiency and self-efficacy when grouped according to gender, type of institution, and area of specialization; and (3) determines the impact of TAs on reframing the workplace in a volatile, uncertain, complex, and ambiguous (VUCA) world. Through these, the research aims to contribute valuable insights to the understanding of the multifaceted dynamics between TAs and teachers in diverse educational settings. The findings assist educators in incorporating and adjusting the advantages of TAs to enhance teachers' efficiency and self-efficacy in the teaching and learning process across domains such as instruction and extension work, as well as research and production in uncertain and ambiguous environments. Policymakers, administrators, and teachers should acknowledge the beneficial functions of TAs in assisting teachers with administrative tasks, providing individualized support to students, and contributing to the overall teaching and learning process and the learning environment.

2. LITERATURE REVIEW

2.1. Channeling TAs in a VUCA World

With continuous changes in the education system, teachers as the frontliners are challenged to keep up and continue to function efficiently in delivering excellent academic services for learners and the community (Adarkwah & Agyemang, 2022; El Masri & Sabzalieva, 2020). Avoiding outdated teaching methods despite the perplexing situations in the world today comes with the importance of catering to the needs of students who are at the core of the education process (Delahunty & Kimbell, 2021; Kim, Leary, & Asbury, 2021).

While there is a growing number of responsibilities attached to being educators, teachers' capacity to sustain quality education, as set out in the United Nations' Sustainable Development Goal (SDG) number 4, needs recalibration, specifically in the realm of a volatile, uncertain, complex, and ambiguous (VUCA) world (Juera, 2024; Kiettikunwong, 2023; Mayer & Wilke, 2022). To ensure the accomplishment of teachers' responsibilities, academic leaders are also required to work with teachers to avoid traditional ways of addressing academic problems and to efficiently secure the quality of education and services provided to learners and other stakeholders (Aloka, Ajayi, & Olendo, 2023; Fabros & Ibañez, 2023; Jameson et al., 2022; Pangandoyon, Lupina, Mandin, & Bauyot, 2024).

When dealing with unpredictable changes in education coupled with the required tasks that teachers deliver, they find themselves struggling and crying out for assistance (Gardesten & Herrlin, 2024). The presence of TAs in academia in times of uncertainty and complexity provide relief for teachers and efficient service support to help them cope with the daily workload (Neaum & Noble, 2023; Pasquinelli, 2024). In addition to the effective and efficient assistance provided by TAs in schools, their presence gives them opportunities to hone their skills, discover their potential, and establish career discipline and professional connections while earning a decent living (Petchey, Treagust, & Niebert, 2023). TAs help grade students' work while the teachers are dedicating their time to teaching the students (Hall, 2023). With the TAs monitoring other classes, teachers can allocate ample to conduct research to improve the state of education (Di Benedetti, Plumb, & Beck, 2023; Goodchild, 2024). Regarding other clerical work, TAs can work on paper reports and other ancillary tasks, while the teachers attend planning sessions and academic meetings to improve the academic system and policies (Brown, MacGregor, Flood, & Malin, 2022; Jardí, Webster, Petrenas, & Puigdellívol, 2022).

2.2. Teachers' Efficiency and Self-Efficacy

In the academic workplace, building an excellent educational foundation lies in its core principles and human resources (Cai, Wang, Bi, & Tang, 2022; Guoyan, Khaskheli, Raza, Khan, & Hakim, 2023). The educators behind any academic success dedicate their effort, expertise, and time to accomplish institutional goals and deliver necessary curricular offerings (Ortan, Simut, & Simut, 2021; Zhang, Wang, & Galinsky, 2023). For an academic institution to reach such a milestone, it takes effective and efficient teachers with high self-efficacy to put their best foot forward in all assigned responsibilities, even if it leads to exhaustion (Fackler, Malmberg, & Sammons, 2021; Marschall & Watson, 2022).

When working in schools, the vision sets the direction and pace of the organization. In order to realize this, administrators and educators alike must possess self-efficacy—the conviction that they are capable of accomplishing the necessary duties to achieve a particular objective (Dong, Zhang, & Ma, 2023; Greisel, Wekerle, Wilkes, Stark, & Kollar, 2023; Wächter, Gorges, Apresjan, & Lütje-Klose, 2024). Through self-efficacy, teachers can successfully attend to all their curricular and extracurricular activities on top of their personal and professional undertakings (Bernard, 2024; Sharma & Jamwal, 2024). It is imperative for teachers to display high self-efficacy to approach different situations in school in a positive manner (Chang & Sung, 2024) to maximize options when dealing with school-related concerns (Burger, 2024) to help them achieve their goals in life (Marcionetti & Castelli, 2023) and to strive for continued excellence so that possible failure can be redirected toward motivation to keep contributing, performing, and achieving goals (Matsunaga, 2024).

While there are numerous studies on self-efficacy in the workplace, teachers' efficiency remains underexamined despite its importance because it encapsulates teachers' ability and competence at work that is essential to the successful achievement of institutional goals (Bardach & Klassen, 2020). While it is significant to attaining academic objectives, teachers' efficiency is challenged by various uncertainties and ambiguities, which, in turn, affects their work (Chan, Sharkey, Lawrie, Arch, & Nylund-Gibson, 2021). Enhancing teachers' efficiency in schools impacts the quality of their work and contributes to the success of schools and learners (Bragg, Walsh, & Heyeres, 2021). With numerous tasks employed among teachers, their efficiency at work remains questioned until teaching assistants

(TAs) appear, offering relevant assistance to both educators and learners (Jackson et al., 2021; Tuiloma & Graham, 2024). Teaching assistants work hand-in-hand with the main teachers to accomplish their workload more efficiently (Bartolic et al., 2022; Mirhosseini, Henley, & Parnin, 2023).

3. METHODOLOGY

3.1. Research Design

The present study utilizes a mixed method design following a single-phase approach, where both quantitative and qualitative data are collected and analyzed separately, and the results are compared (Creswell & Creswell, 2018). The descriptive survey design employs a four-point Likert scale survey questionnaire developed specifically for this study. The content was validated and reviewed for internal consistency. Qualitative data were collected through structured interviews to further investigate, assess, and validate if the responses align with the quantitative data.

3.2. Research Population and Sampling

A total of 100 teachers with teaching assistants were purposively selected from public and private institutions in Region III, Philippines. Teaching assistants comprise student teachers, field study pre-service teachers, on-the-job/immersion pre-service teachers, teacher aides, education assistants, and learning support assistants (Jackson et al., 2021). All respondents in the study gave their informed consent to participate in the study, which was approved by the Central Luzon State University (CLSU) Ethics Research Committee (ERC).

3.3. Instrument

A 35-item survey and a 5-item interview were used, which had a high internal consistency and reliability (Cronbach's $\alpha = 0.92$). The instrument consists of four parts: (1) Teacher-Respondents' profile; (2) Influence of Teaching Assistants; (3) Teaching Assistants in a volatile, uncertain, complex, and ambiguous (VUCA) world; and (4) Interview questions. The survey questions were rated on a four-point Likert scale, and the five structured open-ended questions were reviewed and validated by a panel of five professionals, comprising language and mathematics professors, statisticians, and curriculum experts (see Appendix 1).

3.4. Data Analysis

To measure the level of influence of TAs in terms of teachers' efficiency and self-efficacy, descriptive statistics (mean and standard deviations) were utilized. An analysis of variance (ANOVA) was performed to differentiate the teachers' efficiency and self-efficacy grouped by gender, type of institution, and area of specialization. A thematic content analysis and/or narrative analysis determines the impact of TAs on reframing workplace in the VUCA world. A thematic analysis allows the identification of common themes between cases (Fabros et al., 2023) while a narrative analysis may be more appropriate for analyzing differences in cases and describing the dynamics of individual narratives in their unique context.

3.5. Data Collection Procedures

The data for this study was obtained online through Google Forms. A 'Call for Respondents' was released through the researchers' social media platforms. The respondents comprised 100 teachers with TAs from public and private institutions in Region III, Philippines. The researchers posted a link to the survey on their Facebook and Instagram accounts; a scannable QR code was also a part of the publication material for the 'Call for Respondents'.

To ensure that respondents volunteered to be a part of the study, Data Privacy Clause and Consent information was included at the beginning of the survey. Before proceeding to the items, the respondents were informed about the purpose of the study. To protect the participants' privacy and identity, email addresses were collected. It was

estimated that the online survey would take approximately 20–30 minutes to complete. A confirmation message automatically appeared at the end of the online survey. Personal and sensitive data was handled appropriately in accordance with the Data Privacy Clause and Consent information.

4. FINDINGS AND DISCUSSIONS

This section presents the data analysis results and the responses obtained. It includes the level of influence of TAs on teachers' efficiency and self-efficacy. The differences between teachers' efficiency and self-efficacy were grouped according to gender, type of institution, area of specialization, and the impact of TAs on reframing the workplace in the VUCA world. Table 1 presents the results.

Table 1. TAs' level of influence on teachers' efficiency and self-efficacy, and the TAs impact in a VUCA world.

Statement	Mean	SD	Response
Influence of teaching assistants	2.204	0.816	Agree
Teaching assistants in a volatile, uncertain, complex, and ambiguous (VUCA) world	2.056	0.666	Agree

Table 1 shows the influence of TAs (mean = 2.204; SD = 0.816) on teachers' efficiency and self-efficacy (mean = 2.056; SD = 0.666), which suggests the teacher-respondents "agree" that TAs positively affect their self-efficacy and efficiency in the workplace. While there are numerous complexities in the workplace, assistance from other people, such as TAs, in carrying out one's work responsibilities augment the employees' belief in themselves to accomplish tasks at work (Alshemmari, 2023). Despite time spent mentoring other people in the workplace, many personnel find it fulfilling to train mentees and get assistance from them, thus boosting their confidence and efficiency (Zhang, Maeda, Newby, Cheng, & Xu, 2023).

Table 2. Influence of teaching assistants (TAs).

Statements	Mean	SD	Description	Rank
With highest average ratings				
Statement 6: Attendance at department meetings, school programs, and other functions outside teaching become achievable because of my teaching assistant.	1.747	0.794	Strongly agree	1
Statement 2: Providing support to struggling students is manageable despite my heavy workload because of the presence of my teaching assistant.	1.750	0.742	Agree	2.33
Statement 3: I am very confident that I can grade my students' outputs on time through the help of my teaching assistant.	1.750	0.805	Agree	2.33
Statement 5: I can accommodate consultation hours with my students and their parents/Guardians at times through the help of my teaching assistant.	1.750	0.820	Agree	2.33
With lowest average ratings				
Statement 16: Returning students' outputs speedily is impractical because I have many classes to attend to and so does my teaching assistant while also being occupied with other academic preparations.	2.905	0.845	Disagree	18
Statement 18: Sometimes my students are confused because my teaching assistant provides inaccurate information and instructions on learning activities, which results in poor assessment results.	2.917	0.764	Disagree	19
Statement 17: A couple of times, I missed classes for other official functions and conducted make-up classes because my teaching assistant failed to teach the lessons very well.	3.119	0.751	Disagree	20

Table 2 contains the results of the items that determine the influence of teaching assistants (TAs). It shows that teachers strongly agree that having a TA is beneficial, as they alleviate faculty workload by handling non-teaching duties or administrative tasks, freeing up time for core instructional duties (mean = 1.747; SD = 0.794). With the

help of TAs, especially during uncertainty in the workplace, many employees get the chance to effectively deliver other functions assigned to them (Song, Guo, Fu, Cooke, & Chen, 2023).

Similarly, with the presence of TAs, the majority of the respondents agreed that they were able to attend to struggling students (mean = 1.750; SD = 0.742), provide ample time to guide other learners (mean = 1.750; SD = 0.820), and check learners' assessments in a timely manner (mean = 1.750; SD = 0.805), which reveals the effectiveness and efficiency of TAs in the workplace since their support ensures that instructors can manage work demands. Regarding the volatility of the teaching profession, uncertainties often happen, leaving teachers with numerous adjustments and responsibilities to deal with, and the TAs significantly influence their efficiency in their academic roles (Musah et al., 2023; Ngo, Mustafa, & Butt, 2023).

The respondents disagreed (mean = 3.119; SD = 0.751) that their TAs failed to teach lessons very well, showing that TAs perform excellently to meet the desired learning outcomes. As pre-service teachers, TAs assume the complex role of professional teachers as they prepare themselves for the real world of teaching; hence, it is expected of them to deliver teaching tasks with passion and excellence despite any ambiguity (Baco, Derobertmeasure, Bocquillon, & Demeuse, 2023; Villarama, Fabros, Valdez, & Adsuara, 2023).

Both students and teachers consider TAs to be professional people who can confidently teach a class and assess learners (mean = 2.917; SD = 0.764) and provide clear directions to achieve the learning targets despite a high workload (mean = 2.905; SD = 0.845). Effective collaboration with TAs secures teachers' effectiveness in the workplace, particularly with demanding workloads. With the TAs, valuable support is extended in areas such as grading and leading discussions, allowing instructors to focus on more strategic aspects of course design (Goodwin, Cary, Phan, Therrien, & Shortlidge, 2023; Tuiloma & Graham, 2024). Table 3 presents the results of the items that establish the workplace influence of TAs in a volatile, uncertain, complex, and ambiguous world.

Table 3. TAs' influence in a volatile, uncertain, complex, and ambiguous (VUCA) world.

Statements	Mean	SD	Description	Rank
With highest average ratings				
Statement 29: With the complexities of my work responsibilities, I believe that my teaching assistant extends help and contributes a lot of knowledge in the process.	1.735	0.626	Strongly agree	1
Statement 28: Whenever there are uncertain academic adjustments in school, my teaching assistant is always ready to assist in any way possible.	1.750	0.674	Agree	2
Statement 27: With the complexities of my work, my teaching assistant and I make sure that our learners experience meaningful learning that we can all adopt in the VUCA world.	1.762	0.613	Agree	3
With lowest average ratings				
Statement 32: My teaching assistant displayed stress and/or tenseness when questioned by students who did not understand complex lessons/directions.	2.524	0.784	Agree	33
Statement 34: I believe that my teaching assistant lacks ample exposure to real work and a volatile world.	2.762	0.801	Agree	34
Statement 35: Being pressured by deadlines, I feel like my teaching assistant was more prone to committing errors in reports, slide presentations, and grading, among others.	2.619	0.904	Agree	35

In terms of TAs' presence in the VUCA world, the respondents strongly agree that their TAs are helpful in spite of the complexities of the instructors' responsibilities in the workplace (mean = 1.735; SD = 0.626). With the teachers assigned workload, TAs serve as a valuable human resource in a complex workplace since their dedication to the work at hand subdues the high academic workload of teachers. Whenever uncertainties are experienced

because of academic adjustments, TAs serve as backup, assisting their mentors in any way possible. Teachers and TAs should work collaboratively for their learners to experience meaningful discussions in the VUCA world (mean = 1.750, 1.762; SD = 0.674, 0.613). The results indicate the significance of collaboration between instructors and TAs as the product of fruitful mentorship, which ensures quality education and strong support for students (Wadams & Schick-Makaroff, 2022).

While teachers support the relevance of TAs in the workplace, they agree that deadline pressure leads to increased errors in reports, presentations, and grading papers among TAs (mean = 2.619; SD = 0.904). This finding posits the potential need for improved time management strategies and appropriate workload allocation for teachers and TAs alike (Villarama et al., 2023).

Additionally, TAs should continue to develop their classroom management skills, especially in handling complex lessons, as the teacher agree that they need more exposure to real work and a volatile world (mean = 2.524, 2.762; SD = 0.784, 0.801). The results demonstrate a potential link between TAs' work pressure stress and students' comprehension of complex learning materials (Luckie et al., 2020) which aligns with research on the importance of clear communication and a supportive learning environment (Rasool, Wang, Tang, Saeed, & Iqbal, 2021; Villarama, Barcelita, Pilien, & Crisanto, 2024). Table 4 presents the results of distinguishing the teachers' efficiency and self-efficacy based on their gender, institution, and specialization.

Table 4. Differences in teachers' efficiency and self-efficacy when grouped according to gender, type of institution, and area of specialization.

Variable	Group	Mean	SD	df	F	p
Teachers' efficiency and self-efficacy	Boys/Men	2.114	0.488	1, 18	0.356	0.551
	Girls/Women	2.253	0.501			
	Public	2.280	0.492	1, 18	4.296	0.038*
	Private	1.774	0.041			
	English	2.67	0.577	6, 13	2.565	0.073
	Filipino	2.00	0.000			
	Mathematics	2.33	0.577			
	Science	2.00	0.000			
	Social studies	2.00	0.000			
	Values education	3.00	0.000			
	Others	2.75	0.500			

Note: * Significant at the 0.05 level.

The present study differentiates teachers' efficiency and self-efficacy grouped according to gender, type of institution, and area of specialization.

The descriptive statistics reveal that the mean of teachers' efficiency and self-efficacy grouped by males is 2.114 with SD = 0.488, and females is 2.253 with SD = 0.501. In terms of type of institution, public is 2.280 with SD = 0.492, and private is 1.774 with SD = 0.041. For areas of specialization, English is 2.67 with SD = 0.577, Filipino is 2.00 with SD = 0.000, Mathematics is 2.33 with SD = 0.577, Science is 2.00 with SD = 0.000, Social Studies is 2.00 with SD = 0.000, Values Education is 3.00 with SD = 0.000, and other is 2.75 with SD = 0.500.

Table 4 shows that there is no significant difference according to gender [$F(1, 18) = 0.356, p > 0.05$] and area of specialization [$F(6, 13) = 2.565, p > 0.05$]; hence, regardless of gender and area of specialization in the workplace, teachers are fair in the VUCA world, showing a strong, positive and agreeable outcome when it comes to teachers' efficiency and self-efficacy in the face of uncertainty and complexity in their professional responsibilities. This result eradicates the misconceptions among gender disparities in the workplace (Zhang, Pistorio, Payne, & Lifchez, 2020), unequal perceptions and weight regarding areas of academic specialization (Byun & Raffiee, 2023) and even on the linearity of the promotion of teachers in the workplace (Coleman, 2020). Further, the findings support the influence of SDG 10 (reduced inequalities) in strengthening the possibilities of achieving quality education for learners (SDG 4) and decent work and economic growth (SDG 8).

Interestingly, there is a significant difference between teachers' efficiency and self-efficacy when grouped according to type of institution [$F(1, 18) = 4.296, p < 0.05$]. The results show that the average scores of those in public schools (mean = 2.208, SD = 0.492) are the highest. A post hoc analysis showed that those who work in public institutions earn significantly more than those in private institutions, which implies that the type of institution affects teachers' efficiency and self-efficacy. To some extent, government employees receive a decent salary for their duties performed (Sitopu, Sitingjak, & Marpaung, 2021) that keeps them driven to work and challenges those in private schools to enter the ranking system, while both public and private school employees are assigned a relatively similar workload (Pacaol, 2021), working eight hours a day in general. Further, the findings urge both types of institutions to strengthen their academic, professional, and general welfare support for teachers, who serve as holistic backbones of their institutions, thus promoting strong institutions (SDG 16) and sustainable communities (SDG 11) for all.

Furthermore, to determine the impact of TAs on reframing the workplace, the teachers' responses were analyzed thematically. Table 5 shows four major themes with 12 key terms in total, and core statements from the respondents as the qualitative summary of the research on reframing the workplace influence of TAs on teachers' efficiency and self-efficacy in a VUCA world.

Table 5. Teachers' responses as the qualitative summary on reframing the workplace influence of TAs on teachers' efficiency and self-efficacy in the VUCA world.

Major theme	Key terms	Core statement
1. Work experience in a VUCA world with teaching assistants	Empowering & encouraging	"In an ever-changing, uncertain academic world, as mentors and teachers, we not only guide our teaching assistants, but we also empower them as second teachers or advisers of our students, thus encouraging them to be reliable and responsible professionals."
	Collaborative	"I had the opportunity to collaborate closely with teaching assistants in navigating the complexities of the VUCA world."
	Less workload	"I am thankful to mentor a teaching assistant because my workload became lighter."
2. Instructional frame in a VUCA world with teaching assistants	Adaptive & helpful	"As a teacher, I appreciate the adaptability and helpfulness provided by my teaching assistant, especially in ambiguous situations, which has greatly contributed to our students' success."
	Creative & dynamic	"Through my teaching assistants, I was able to manage the courses assigned to me with creative instructional materials, thereby facilitating and adapting to dynamic discussions and learning environments for our students."
	Innovative & relevant	"Attending my classes became easier with the help of my teaching assistants because they have innovative instructional strategies and knowledge relevant to our teaching assignments."
3. Challenges in a VUCA world with teaching assistants	Flexibility on class modality	"Uncertain class modalities challenged most of our teaching assistants because they had to suddenly shift from full in-person classes to asynchronous classes, in

Major theme	Key terms	Core statement
		which they received little training.”
	Decision making	“Working with a teaching assistant needs a lot of changes in making decisions and teaching strategies. That’s why as a mentor teacher I need to be more ready for these changes so I can share more with my teaching assistant.”
	Preparedness	“Not all teaching assistants are the same. It is evident that some lack preparedness to face teaching complexities.”
4. Enhancements in a VUCA world with teaching assistants	Manageable	“Working with teaching assistants has a positive effect on me as a teacher, especially as I am able to manage my time for research, extension services, and instruction.”
	Mentorship	“The influence of teaching assistants enhanced my mentorship style, reflecting my capability in teaching students and reinforcing my passion to mentor other people, which is very important in creating a peaceful workplace.”
	Professionalism	“Luckily, my teaching assistants were very diligent and professional in dealing with the profession and their responsibilities and were open to suggestions for improvement.”

Teachers spend most of their time in the workplace guiding their students. The presence of TAs has reframed the heavy workloads of teachers through a collaborative work approach that empowers teachers to be more efficient in any work assigned to them while encouraging TAs to be at their best as pre-service teachers who share a pivotal role in reducing the workloads of employees and creating a better workplace for all. As supported by [Ortan et al. \(2021\)](#), when a workplace is set for the better, employees tend to be more efficient.

In terms of instructional frame, TAs reframe the traditional academic workplace through being adaptive and helpful to their mentors in leveling up more creative and dynamic classroom discussions and innovative and relevant activities for their learners, proving productive mentoring in which both the teachers and TAs teach and learn from one another to bring excellence to education ([Jardí et al., 2022](#); [Villarama et al., 2022](#)).

Despite the positive reframing of the workplace in a VUCA world through the presence of TAs, challenges exist in terms of the preparedness of TAs to handle changes in the class modality (from full in-person to asynchronous modes) that challenged their decision-making skills and flexibility in times of complexity. Faltering situations, as experienced by teachers with TAs, require the mentors to take on the responsibility of ensuring that TAs receive the appropriate guidance in order for them to perform their duties in a VUCA situation ([Wilson & Huynh, 2020](#)).

The workplace influence of TAs in a VUCA world, as experienced by the teachers, increases their time management skills, which provides them with an equal opportunity to publish research, conduct extension services, and improve their academic instruction. Through the TAs, the teachers reframed the VUCA workplace by cultivating positive mentorship to provide a quality education and service to learners, which strengthened their work attitude, ethics, and professionalism ([Binti Mappah, 2024](#)).

5. CONCLUSION

As the demands on educators increase in the ever-changing academic system, the findings of this study highlight the advantages of teaching assistants (TAs) in the volatile, uncertain, complex, and ambiguous (VUCA) world of the workplace. This study investigated TAs and their influence on teachers' workplace efficiency and self-efficacy in the VUCA world. The TAs pointedly augment the teachers' self-efficacy and efficiency in delivering their complex functions in the workplace. Teachers value their TAs for easing the faculty workload, which permits the teachers to better attend to struggling students, guide other learners, and assess students' academic performance in a timelier manner. In uncertain times, TAs are challenged to teach lessons effectively due to ambiguous class schedules and modalities, indicating the complicated roles of professional teachers. Both teachers and students perceive TAs as professionals who are capable of teaching, assessing, and providing clear directions despite their heavy workloads. In the VUCA world, teachers firmly believe that TAs are vital in spite of the complexities of the teachers' responsibilities in the workplace. However, while teachers support the substantial influence of TAs, deadline pressures lead to minor errors in non-teaching-related work. Thus, TAs should continue to develop their classroom management skills and gain more exposure to real-world teaching challenges. Teachers' efficiency and self-efficacy have no significant difference between gender or area of specialization, indicating fairness in these aspects within the VUCA world. Yet, a significant difference was found according to the type of institution. Teachers' efficiency and self-efficacy in public schools scored higher than for those in private institutions. The TAs significantly impacted the reframing of the workplace. They alleviate teachers' heavy workloads, enhancing efficiency, and empowering TAs as pre-service teachers. The TAs also adapt and support creative and dynamic classroom discussions. Despite these benefits, challenges remain in TAs preparedness for handling uncertain changes in class modalities. Overall, TAs improve teachers' time management, enabling opportunities for research, extension services, and better academic instruction.

5.1. Research Limitations

A 'Call for Respondents' was posted on social media, where 100 teachers with teaching assistants from Region III in the Philippines are the only target respondents of this study. The survey form could not be completed in person due to the limitations imposed by the health protocols in schools and mobility concerns; hence, a Google form was created in its place. Other factors, such as age, civil status, socioeconomic status, and academic degree attained by the teachers with teaching assistants were not explored. This study solely focused on teachers; other professions with assistants were not covered.

6. IMPLICATIONS

To facilitate the awareness and appropriate consideration of the concept of TAs in various institutions, specific attributes of TAs must be gathered to obtain more specific data; thus, further investigations should explore and define the specific functions of TAs in numerous departments and agencies before their deployment. Moreover, it is recommended that further research be conducted to analyze and clarify the TAs' concerns and challenges in various academic disciplines so that their specific office deployment can be institutionalized while safeguarding their general welfare and honing their optimum potential.

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Institutional Review Board Statement: The Ethical Committee of the Central Luzon State University, Philippines has granted approval for this study on 17 January 2024 (Ref. No. 2024-057).

Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

Competing Interests: The authors declare that they have no competing interests.

Authors' Contributions: All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

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APPENDIX

Appendix 1. Instrument.

Reframing the Workplace in a VUCA World: Teaching Assistants and Their Influence on Teachers' Efficiency and Self-efficacy

Joseph A. Villarama, Bench G. Fabros, Verjun J. Dilla, Melvin S. Valdez

Dear Teacher-Respondent

Warm Greetings!

We are conducting a study titled *"Reframing the Workplace in a VUCA World: Teaching Assistants and Their Influence on Teachers' Efficiency and Self-efficacy."* This study (1) measures the level of influence of TAs on your efficiency and self-efficacy; (2) differentiates your efficiency and self-efficacy when grouped according to gender, type of institution, and area of specialization; and (3) determines the impact of TAs on reframing the workplace in a volatile, uncertain, complex, and ambiguous (VUCA) world.

Your active participation is integral to the success and timely completion of this study. Rest assured that all the data gathered will be treated with confidentiality for the sole purpose of this study. Thank you very much for your time.

Respectfully yours,

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DATA PRIVACY CLAUSE AND CONSENT

In compliance with the Data Privacy Act (DPA) of 2012, and its Implementing Rules and Regulations (IRR) effective since September 8, 2016, I agree and authorize the researchers to: (1) use my provided personal information for their research; (2) retain my provided information for a period of three (3) years, or at such time that I submit a written cancellation of this consent; (3) delete my provided information after the said period; (4) gather relevant information related to this research, assuring that all provided information is treated with high confidentiality; and (5) share my provided information as respondent, assuring that security systems are employed to protect my provided information.

I also acknowledge and warrant that I have acquired the consent from all other offices relevant to this consent and hold free and harmless and indemnify the researchers from any complaint, suit, or damages, which anyone may file or claim to my consent.

SIGNATURE OVER PRINTED NAME OF RESPONDENT

Instrument

Reframing the Workplace in a VUCA World: Teaching Assistants and Their Influence on Teachers’ Efficiency and Self-efficacy

Joseph A. Villarama, Bench G. Fabros, Verjuna J. Dilla, Melvin S. Valdez

General Instructions

Please provide the information required for every item. Choose one from the given options as your answer. For the items with rating options, please provide your honest assessment by ticking one rating. For open-ended questions, feel free to answer as honestly possible. Rest assured that all data are treated with the utmost confidentiality.

I. PROFILE OF TEACHER-RESPONDENT

1. Gender

Anchored on Human Rights in Ontario: Gender identity and Gender expression. (2014). <http://www.ohrc.on.ca>.

- Male
- Female
- Non-binary
- Other (please specify _____)

2. Type of Institution (check all that apply)

- Public
- Private
- Elementary
- Secondary
- Tertiary

3. Area of Specialization

- English
- Filipino
- Information and Communication Technologies
- Music/Arts/Physical Education/Health
- Mathematics

- ___ Science
- ___ Social Studies/History/Araling Panlipunan
- ___ Technology and Livelihood Education
- ___ Values Education/Religion/Guidance & Counseling/ESP
- ___ Other (please specify _____)

II. INFLUENCE OF TEACHING ASSISTANTS

(1 = Strongly Agree; 2 = Agree; 3 = Disagree; 4 = Strongly Disagree)

Statements	4	3	2	1
1. With my teaching assistant, students' active engagement in learning activities has increased over time.				
2. Providing support to struggling students is manageable despite my heavy workload because of the presence of my teaching assistant.				
3. I am very confident that I can grade my students' outputs on time with the help of my teaching assistant.				
4. My teaching assistant helps me with or prepares instructional materials for my classes.				
5. I accommodate consultation hours with my students and their parents/guardians at times with the help of my teaching assistant.				
6. Attendance at department meetings, school programs, and other functions outside teaching become achievable because of my teaching assistant.				
7. My teaching assistant provides detailed feedback on the academic progress and outputs of my students.				
8. Even after office hours, I manage to respond to emails, chats, messages, and/or calls from my students and others with the help of my teaching assistant.				
9. I am extremely confident that a positive classroom climate/environment is maintained through the presence of my teaching assistant.				
10. I stay updated on my area of specialization through attending to conferences/seminars/trainings/workshops while my teaching assistant extends help in facilitating my classes.				
11. While a teaching assistant work with me in my classes, I still find it challenging to grade all of the papers.				
12. Even with my teaching assistant, it is difficult for me to keep up with the current trends in the education, especially in terms of technology integration and utilization.				
13. My workload and responsibilities increased relatively because of guiding, providing instructions, and teaching my teaching assistant before facilitating my classes.				
14. Writing proposals, conducting research studies, and publishing papers remain impossible for me even with the help of my teaching assistant.				
15. Although I am assigned a teaching assistant, I have mismanaged schedules a few times because my teaching assistant is also busy with curricular and extracurricular activities.				
16. Returning students' outputs speedily is impractical because I have many classes to attend to and my teaching assistant is also occupied with many academic preparations.				
17. I have missed classes a couple of times for other official functions, and I conducted make-up classes because my teaching assistant failed to teach the lessons very well.				
18. Sometimes my students are confused because my teaching assistant provided inaccurate information and instructions on learning activities, which resulted in poor assessment results.				
19. I am confident that my teaching assistant needs proper orientation and training before assisting in my classes.				
20. Despite my heavy workload, I can deliver my responsibilities with efficiency even without a teaching assistant.				

III. TEACHING ASSISTANTS IN THE VOLATILE, UNCERTAIN, COMPLEX, AND AMBIGUOUS (VUCA) WORLD

(1 = Strongly Agree; 2 = Agree; 3 = Disagree; 4 = Strongly Disagree)

Statements	4	3	2	1
21. My teaching assistant and I have enough knowledge on VUCA and its practical application/integration to our lessons.				
22. With the assistance of my teaching assistant, the application/integration of VUCA helps our students to deal with uncertain situations in school.				
23. When my teaching assistant helped me solve complex and ambiguous problem in school, I am confident that they are equipped with the necessary knowledge and skills.				
24. My teaching assistant displayed enough preparedness for real-work and the volatile world.				
25. I am confident that my teaching assistant shows openness to collaborations and meaningful learning in the VUCA world.				
26. While there are complex learning activities that my teaching assistant facilitated in my classes, students acquire critical thinking skills.				
27. My teaching assistant and I make sure that our learners experience meaningful learning that we can all adopt in the VUCA world.				
28. Whenever there are uncertain academic adjustments in school, my teaching assistant is always ready to assist in any way possible.				
29. With the complexities of my work responsibilities, I believe that my teaching assistant extends help and contributes a lot of knowledge in the process.				
30. Sometimes my teaching assistant explains complex lessons to my students very well.				
31. Although it is part of our personal and professional lives, I am confident that my teaching assistant and I need more time to fully grasp VUCA.				
32. My teaching assistant displayed stress and/or tension when questioned by students who did not understand complex lessons/directions.				
33. In terms of deciding on ambiguous situations in school and in our classes, my teaching assistant is compelled.				
34. I believe that my teaching assistant lacks ample exposure to real work and the volatile world.				
35. Being pressured by deadlines, I feel like my teaching assistant was more prone to making errors in reports, slide presentations, and grades, among others.				

IV. INTERVIEW GUIDE QUESTIONS

1. Could you please provide an overview of your work experience with a teaching assistant in the VUCA world, during the present semester of the academic year?

2. Were there any experiences, interactions, or observations that enhanced your working conditions in the VUCA world as a result of having a teaching assistant?

3. Have you encountered any workplace challenges or obstacles as a result of working with your teaching assistant in the VUCA world?

4. How would you assess the work environment and instructional methods of teachers in the VUCA world without teaching assistants in comparison to your own?

5. Is there any other feedback you want to provide regarding your workplace and teaching experience with teaching assistants in the VUCA world?

Thank you very much for your contribution, effort, honesty, and time.

-The authors

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