



Teachers' knowledge, perceptions, and practices in integrating elements of volatility, uncertainty, complexity, and ambiguity (VUCA) into language teaching

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ABSTRACT

In today's constantly evolving educational environment, teachers face challenges due to the unpredictable and complex nature of the world. Volatility, uncertainty, complexity, and ambiguity (VUCA) characterize this era, influencing how people interact with information and navigate life. This descriptive study examined language teachers' knowledge, perceptions, and practices regarding the integration of VUCA elements into language teaching. One hundred language teachers participated by completing a questionnaire created by the researchers. The results showed that the teachers were "quite knowledgeable" about integrating VUCA elements and had a "positive perception" of it. Additionally, the study found that these teachers "always practiced" several strategies related to VUCA integration. These strategies included collaborative learning, multimodal instruction, developing language and intercultural competence, creating global connections, integrating technology, engaging in reflective practice, and pursuing continuous professional development. They also "often practiced" flexible lesson planning, fostering resilience and adaptability in learners, using problem-based and inquiry-based learning, employing dynamic assessment, and promoting authentic and real-world language use. Therefore, the extensive knowledge of language teachers allows them to design and implement learning environments that truly reflect the complexities of the real world.

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1. Introduction

There has been increasing recognition of the significance of incorporating VUCA elements into language teaching to adequately prepare learners for the challenges of a rapidly changing world (Yacob et al., 2023). VUCA, an acronym representing volatility, uncertainty, complexity, and ambiguity (VUCA), encompasses the dynamic and unpredictable nature of the contemporary global landscape (Mohanta et al., 2020). Since language is a fundamental tool for communication and understanding, it becomes essential to explore how these elements can be effectively integrated into language instruction (Shliakhovchuk, 2021).

Despite the growing emphasis on VUCA integration in language teaching, a significant

research gap exists concerning the role of teachers' knowledge, perception, and practices in this process (Menon et al., 2023). While several studies have examined its theoretical aspects and implications for education, limited attention has been given to understanding how language teachers perceive and implement these elements in their instructional practices (Hadar et al., 2020; Back et al., 2021).

Investigating the role of teachers' knowledge is critical for understanding their familiarity with VUCA concepts and their effects on language teaching (Hadar et al., 2020; Shliakhovchuk, 2021; Yacob et al., 2023). It encompasses understanding the changing dynamics of societies, the influence of globalization and technology, and the impact on language learning and communication (Golowko, 2021). Examining their knowledge identifies possible gaps or misconceptions and develops targeted training programs to enhance their understanding of VUCA elements (Walsh et al., 2022). Additionally, teachers' perception of VUCA is crucial in shaping their instructional decisions and practices (Caena and Redecker, 2019). Their beliefs, attitudes, and biases can significantly affect their ability to effectively incorporate them into their

teaching methodologies (Shliakhovchuk, 2021). Exploring their perceptions can reveal potential barriers or resistance they may encounter, enabling the development of interventions to address any misconceptions or concerns (Keinänen and Havia, 2022).

Understanding teachers' practices integrating VUCA elements is also essential (Ciolacu et al., 2023; Yacob et al., 2023). Analyzing current practices provides insights into language strategies, techniques, and pedagogical approaches to incorporating those elements into their teaching (Seow et al., 2019). By identifying successful practices, they can gain valuable guidance on creating engaging and relevant learning experiences that equip learners with the necessary skills to navigate the complexities of the modern world (Bühler et al., 2022).

VUCA elements in language teaching characterize the dynamic nature of modern society and the obstacles learners face while navigating their environment. Language teachers are critical in providing learners with the skills and competencies to flourish in complicated and unpredictable situations. As a result, it is critical to investigate teachers' knowledge, perception, and practices regarding incorporating VUCA elements inside the classroom, thus this study. This can comprehensively create learning environments that prepare learners to thrive in an ever-changing world, equipping them with the skills, adaptability, and resilience to succeed personally and professionally. Hence, this research may be a foundation for developing evidence-based policies, curriculum enhancements, and teacher training programs that foster a VUCA-responsive education system.

2. Review of literature

The VUCA emerged in the late 20th century. It became a framework for understanding and navigating the challenges of a rapidly changing world (Giones et al., 2019). Its origins can be traced back to the US Army War College, first introduced in the late 1980s (Kaivo-oja and Lauraeus, 2018). Its concept was initially developed within the context of military strategy and meant to describe the conditions faced by military leaders in the aftermath of the Cold War and during the conflict in Afghanistan (Porkoláb and Zweibelson, 2018). Its application extends beyond the military domain and has gained attraction in various fields, including business (Veldsman and Pauw, 2018; Jengwa and Pellissier, 2022), management (Padmaja, 2019), and healthcare (Murugan et al., 2020; Ustgorul, 2022). Recent studies have shed light on the relationship between VUCA elements and education, highlighting the challenges and opportunities they present for educational systems, institutions, and stakeholders (Hadar et al., 2020; Latha and Christopher, 2020; Brown and Duignan, 2021; Schulze et al., 2021; Yacob et al., 2023). Volatility encompasses technological shifts, social dynamics, economic

conditions, and global trends (Afshan et al., 2024). Measuring and addressing its impact is crucial for teachers to adapt their teaching methods, curriculum, and learning environments accordingly (Ameloot et al., 2024). For instance, research by Purcell and Lumbreras (2021) emphasized the need for educational institutions to develop agile and responsive strategies to navigate volatile conditions and provide relevant learning experiences effectively. Meanwhile, uncertainty evolves from policy changes, student needs, and unpredictable economic conditions (Millar et al., 2018). Scholars have highlighted the importance of fostering adaptability and resilience among learners to thrive in uncertain times (Maritz et al., 2020). Complexity, conversely, characterizes the intricate and interconnected nature of educational systems (Carbonaro, 2021). It arises from diverse learner needs, policy frameworks, and stakeholder dynamics (Saleh and Watson, 2017). Moreover, teachers must employ innovative pedagogical approaches that promote critical thinking, problem-solving, and interdisciplinary learning. Likewise, ambiguity arises from conflicting policies, contradictory data, or evolving societal values (Buckley, 2020). Scholars argue that fostering a growth mindset among learners can help them navigate ambiguous situations and develop creative solutions (Shet, 2024). Furthermore, educational leaders provide clear guidance, communicate effectively, and engage stakeholders in meaningful dialogues to reduce ambiguity and promote shared understanding (Bao et al., 2024).

The VUCA elements present unique challenges and opportunities for the field of education (Seow et al., 2019). To navigate the rapidly changing educational landscape, teachers, policymakers, and researchers need to develop strategies and practices that build resilience, adaptability, critical thinking, and effective decision-making skills among learners and educational leaders (Caena and Redecker, 2019). Specific contexts and approaches enable educational institutions to thrive in a VUCA world, providing learners with the knowledge and skills necessary for success in an uncertain and complex future (Waller et al., 2019).

3. Methodology

3.1. Research design

This descriptive study aimed to determine language teachers' knowledge, perception, and practices in integrating VUCA elements in language teaching. According to Colorafi and Evans (2016), it is a research method that aims to describe or summarize a phenomenon or population without manipulating or influencing it. Its primary objective is to provide an accurate and detailed account of a specific group or situation's characteristics, behaviors, or attitudes (Kim et al., 2017). It involves observing and documenting variables of interest, such as demographics, behaviors, beliefs, or

attitudes, without making causal inferences or generalizing beyond the specific group or situation being studied (Jawed and Hogan, 2024).

3.2. Study respondents

The study targeted 100 language teachers in one of the districts in Iloilo, Philippines, and employed a snowball sampling technique to select the respondents. The snowball sampling method involved identifying initial respondents who met the criteria and then asking them to refer other eligible language teachers within their network. This approach was chosen to maximize the diversity and representativeness of the sample. Specific criteria bounded the selection to ensure the inclusion of qualified respondents. They were required to hold a bachelor's or master's degree in education, linguistics, or a related field and with a minimum teaching experience of five years. These criteria aimed to include teachers who had acquired substantial practical knowledge and expertise in language instruction through their years of teaching. Language teachers who did not meet the selection criteria were excluded from the study to maintain the relevance and validity of the research findings. This step aimed to ensure that the participants possessed the qualifications and experience to provide valuable insights into the study's focus.

The selected respondents were given an orientation session before administering the research instrument. During this meeting, they were informed about the data collection processes, including the purpose of the study, the methods used, and the significance of their involvement. They were also aware of the potential risks and benefits of their participation and their voluntary participation. Furthermore, they were assured that their personal information would be kept confidential and be used solely for research. Clear instructions regarding the proper disposal of the data after the completion of the study were also provided.

3.3. Research instrument

This descriptive study employed a research-made questionnaire to gather data. Before its implementation, the questionnaire underwent a rigorous validation process involving input and evaluation from three language teaching and research experts. Their expertise ensured that the questionnaire effectively measured the intended constructs.

A reliability test was conducted among 30 non-respondents to assess the consistency and stability of the questionnaire's results over time. The reliability testing yielded favorable results, indicating high internal consistency within the questionnaire. The teachers' knowledge section was 0.924, indicating high internal consistency among the items. This suggests that the questionnaire reliably measures the knowledge aspect of the language teachers in integrating VUCA elements in

language teaching. Likewise, the teachers' perception section obtained 0.927, indicating strong internal consistency among the items. This indicates that the questionnaire provides reliable data regarding the teachers' perceptions of integrating VUCA elements in language teaching. Similarly, the teachers' practices section obtained 0.935, signifying a high level of internal consistency among the items. This suggests that a questionnaire is a reliable tool for capturing information about the teaching practices of language teachers in integrating VUCA elements in language teaching.

4. Results and discussion

4.1. Teachers' knowledge in the integration of VUCA elements in language teaching

Table 1 shows that respondents were "quite knowledgeable" ($M=4.01$, $SD=0.13$) in integrating VUCA elements in language teaching. The standard deviation suggests that the responses are relatively consistent and closely clustered around the mean, indicating their similar level of knowledge. These findings resonate with the study of Baskara (2023), noting that language teachers often face challenges in adapting their instructional methods to the dynamic nature of the modern world. Lo (2024) underscored the impact of resource constraints on language teachers' ability to incorporate innovative approaches. This implies a broader issue within language education.

Traditional teaching methodologies historically prioritized cultivating linguistic competence rather than preparing learners for the dynamic and unpredictable modern world (Zainuddin et al., 2024). The absence of explicit guidance on incorporating VUCA elements in language curricula and training programs compounds the issue. These leave teachers without a clear framework to address these challenges (Wu et al., 2024). Additionally, they grapple with constraints in resources, time, and institutional support, hindering the implementation of innovative approaches and dynamic content essential for VUCA integration (Kopackova et al., 2024). Limited professional development opportunities further impede their ability to navigate the complexities of a VUCA environment (Enstroem and Schmaltz, 2024). Moreover, prevalent language teaching assessment methods emphasize standardized linguistic proficiency measures. Hence, it neglects critical thinking and adaptability (Zalbidea, 2024). This narrow focus discourages the exploration of alternative pedagogical approaches that foster a more comprehensive set of competencies necessary in a VUCA world (Rokos, 2024).

The misalignment between traditional language teaching objectives and the demands of a VUCA world contributes to a lack of awareness among language teachers. Many may not fully grasp the importance of integrating VUCA elements or feel ill-prepared to adapt their teaching methods. The

congruence in these findings across different studies emphasizes the need for a comprehensive approach to address the gaps in language teacher preparation, including targeted training programs and explicit guidance. Grounded in situated cognition theory, which emphasizes learning within authentic contexts, language teachers must possess deep knowledge not only of language teaching methodologies but also of the dynamic and unpredictable nature of VUCA environments (Mahel, 2021). They can perceive language classrooms as complex adaptive systems wherein they must navigate the volatile, uncertain, complex, and ambiguous nature of language acquisition processes (Henriksen et al., 2022). This emphasizes the importance of their adaptive expertise, allowing

them to respond flexibly to evolving challenges and leverage emergent opportunities within language learning environments (Von Esch and Kavanagh, 2018).

Additionally, sociocultural theory highlights the role of social interaction and cultural context in learning (Glăveanu, 2020). It emphasizes that language teachers must possess cultural competence and sensitivity to integrate VUCA elements into language teaching effectively (Badrin et al., 2024). By incorporating principles of reflective practice, they can continuously evaluate and refine their instructional strategies to address the ever-changing linguistic landscapes, fostering resilience and adaptability in both themselves and their learners (Abulibdeh et al., 2024).

Table 1: Teachers' knowledge

Items	M	SD	Interpretation
I possess knowledge of the VUCA framework and its implications for language teaching	3.95	0.88	Quite knowledgeable
I understand the volatile, uncertain, complex, and ambiguous nature of the contemporary world and its impact on language learning and instruction	4.08	0.60	Quite knowledgeable
I have a solid understanding of language pedagogy theories, methodologies, and approaches	3.87	0.80	Quite knowledgeable
I am knowledgeable about communicative language teaching, task-based learning, content-based instruction, and other relevant approaches that align with VUCA elements	3.90	0.77	Quite knowledgeable
I have a strong foundation in understanding the stages of language development and language assessment principles	3.82	0.82	Quite knowledgeable
I know language proficiency frameworks, assessment rubrics, and strategies for evaluating and monitoring learners' language progress	3.79	2.01	Quite knowledgeable
I possess knowledge of technology tools and platforms relevant to language teaching and learning	3.93	0.92	Quite knowledgeable
I am familiar with language learning apps, online resources, multimedia materials, and educational technology trends that support language instruction in a VUCA context	3.85	0.82	Quite knowledgeable
I am knowledgeable about intercultural competence and its significance in language teaching	4.01	0.58	Quite knowledgeable
I understand the role of cultural awareness, sensitivity, and effective communication in helping learners navigate intercultural encounters in the VUCA world	4.15	0.50	Quite knowledgeable
I know multilingualism and language diversity	4.00	0.94	Quite knowledgeable
I understand the benefits and challenges associated with teaching and learning languages in diverse contexts, and they value linguistic diversity in the language classroom	4.19	0.76	Quite knowledgeable
I keep them updated on current language trends, resources, and research in language teaching	4.10	0.75	Quite knowledgeable
I am aware of emerging language learning materials, innovative teaching practices, and scholarly studies that relate to VUCA elements	3.90	0.86	Quite knowledgeable
I am knowledgeable about ethical considerations related to language use and technology integration	4.04	0.91	Quite knowledgeable
I understand issues such as online safety, digital literacy, responsible use of technology, and privacy concerns in the language learning environment	4.23	0.96	Highly knowledgeable
I possess the knowledge and skills to adapt their teaching approaches and instructional materials based on student's needs and the changing VUCA landscape	4.06	0.82	Quite knowledgeable
I can modify lesson plans, differentiate instruction, and address language challenges that arise from volatile or complex language contexts	4.08	0.78	Quite knowledgeable
I actively participate in professional learning networks, both online and offline	4.03	0.79	Quite knowledgeable
I engage in collaborative discussions, share resources, and learn from other language teachers to enhance their knowledge and understanding of VUCA elements	4.16	0.77	Quite knowledgeable
As a whole	4.01	0.13	Quite knowledgeable

Highly knowledgeable: 4.21–5.00; Quite knowledgeable: 3.41–4.20; Moderately knowledgeable: 2.61–3.40; Slightly knowledgeable: 1.81–2.60; Not at all knowledgeable: 1.00–1.80

4.2. Teachers' perception in the integration of VUCA elements in language teaching

Table 2 shows that the respondents had a "positive perception" ($M=4.21$, $SD=0.22$) of integrating VUCA elements in language teaching. The standard deviation suggests that the responses were relatively consistent or clustered around the mean score, indicating some variation in the extent of positivity among the respondents. This assertion is reinforced by the findings of Yacob et al. (2023), who affirm the willingness of ESL teachers to incorporate VUCA elements into their lesson activities. This aligns with the prevailing notion that language teachers actively endorse integrating these elements, emphasizing a dedication to readying learners for real-world challenges (Seow et al.,

2019). They stress linguistic competence and feature the cultivation of adaptability and resilience (Ergün and Dewaele, 2021). This strategic emphasis equips learners with the essential skills required for navigating the intricacies of the dynamic modern environment. Vygotsky's Zone of Proximal Development (ZPD) emphasizes the importance of presenting learners with tasks that challenge them just beyond their current level of competence but are achievable with support (Nicholas et al., 2021). This principle is perfectly reflected in the integration of VUCA elements, where learners are exposed to situations that require them to grapple with VUCA in language use (Teba-Fernández and El Shennawy, 2021). Rather than relying solely on rote memorization or the application of grammar rules in isolation, learners are challenged to engage with

language in multifaceted ways (Al-Khresheh, 2024). They must navigate real-world communicative situations where the meaning of language is nuanced and context-dependent. This approach encourages learners to actively construct meaning, draw connections between disparate concepts, and develop their problem-solving skills.

For instance, language activities that involve role-playing scenarios, collaborative projects, or cross-cultural communication tasks require learners to adapt their language use to different contexts and audiences (Qi, 2024). These experiences not only deepen their understanding of language structures and functions but also cultivate critical thinking skills as they analyze and interpret complex linguistic cues.

The intrinsic connection between language acquisition and diverse cultural and social contexts becomes evident as VUCA elements furnish a valuable framework for negotiating the complexities of cross-cultural communication (Baran and Woznyj, 2020). Language teachers seize the opportunity to expose learners to diverse perspectives, augmenting language proficiency and fostering intercultural competence—an indispensable attribute in today's interconnected global society (Shliakhovchuk, 2021). Moreover, integrating those elements catalyzes critical thinking skills, compelling learners to analyze information, make judicious decisions, and communicate effectively in diverse situations (Gupta and Garg, 2021). This pedagogical approach

transcends mere rote memorization, fostering a profound understanding of language as a dynamic tool for navigating complex communication scenarios.

In an era characterized by the perpetual evolution of information, language teachers discern the importance of instilling a continuous learning mindset (Molway and Mutton, 2020). This endeavor aspires to cultivate curiosity, adaptability, and a proclivity for engaging with new linguistic challenges throughout learners' lives. This holistic approach augments language education and equips learners with the multifaceted skills needed to thrive in a rapidly changing and interconnected world.

Language teachers aim to instill in learners a versatile set of transferable skills, encompassing adaptability, critical thinking, intercultural competence, and an acute awareness of the dynamic nature of language. Therefore, integrating VUCA elements mirrors a strategic response to the evolving demands of the contemporary world (Krawchuk, 2018). This recognizes that effective communication extends beyond language mastery to encompass a deeper understanding of the complexities and uncertainties inherent in diverse linguistic and cultural contexts (Leung and Scarino, 2016). As education adapts to meet the challenges of the 21st century, this approach remains a pivotal and forward-looking strategy, preparing learners to thrive in a world characterized by constant change and diversity.

Table 2: Teachers' perception

Items	M	SD	Interpretation
I perceive adaptability as a crucial skill in language teaching in the VUCA world	4.00	0.70	Slightly positive perception
I believe in the importance of adapting their instructional strategies, materials, and assessments to address the dynamic and unpredictable nature of language learning	4.52	0.78	Positive perception
I recognize the value of multilingualism and intercultural competence in a VUCA context	3.82	0.67	Slightly positive perception
I promote the development of language skills alongside cultural awareness to prepare learners for global communication and collaboration	4.20	0.75	Slightly positive perception
I view effective communication skills as essential in navigating VUCA elements	4.22	0.81	Positive perception
I prioritize the development of learners' listening, speaking, reading, and writing abilities to enable precise and meaningful communication in diverse contexts	4.25	0.96	Positive perception
Critical thinking and problem-solving skills are fundamental for language learners in the VUCA world	3.96	0.78	Slightly positive perception
I encourage learners to analyze language contexts, identify language challenges, and apply effective strategies to overcome them	4.16	0.58	Slightly positive perception
I recognize the role of technology in language teaching and learning in a VUCA environment	4.19	0.85	Slightly positive perception
I emphasize developing digital literacy skills, including online research, digital collaboration, and responsible use of technology tools	4.00	0.74	Slightly positive perception
I value creativity and innovation as drivers of language learning in the VUCA world	4.17	0.87	Slightly positive perception
I foster a supportive environment that encourages learners to think creatively, take risks, and explore new ways of using language	4.06	0.72	Slightly positive perception
I believe in exposing learners to global perspectives in language learning	4.47	0.61	Positive perception
I incorporate authentic materials, cultural exchanges, and discussions on global issues to broaden learners' understanding and appreciation of different cultures and languages	3.96	0.45	Slightly positive perception
Continued learning and professional development are essential in adapting to VUCA elements	4.39	0.69	Positive perception
I actively seek opportunities to enhance their knowledge and skills through workshops, conferences, and collaboration with other language teachers	4.10	0.87	Slightly positive perception
I prioritize student-centered approaches that empower learners to take ownership of their language-learning journey	4.35	1.12	Positive perception
I facilitate active engagement, autonomy, and reflection to foster self-directed learners who can thrive in VUCA contexts	4.34	1.08	Positive perception
I acknowledge the importance of supporting learners' resilience and well-being in the face of VUCA elements	4.60	0.70	Positive perception
I create a positive and inclusive classroom environment that promotes emotional well-being, self-care, and stress management	4.53	0.69	Positive perception
As a whole	4.21	0.22	Positive perception

Positive perception: 4.21–5.00; Slightly positive perception: 3.41–4.20; Undecided perception: 2.61–3.40; Slightly negative perception: 1.81–2.60; Negative perception: 1.00–1.80

4.3. Teachers' practices in the integration of VUCA elements in language teaching

Table 3 reveals the teachers' practices in integrating VUCA elements in language teaching. Most respondents "always practiced" collaborative learning (M=4.48, SD=0.00), multimodal instruction (M=4.37, SD=0.06), language and intercultural competence development (M=4.30, SD=0.11), global connections (M=4.25, SD=0.05), technology integration (M=4.24, SD=0.10), reflexive practice (M=4.23, SD=0.16), and continuous professional development (M=4.23, SD=0.14). The mean values indicate the average rating given by the respondents for each practice. The higher the mean value, the more frequently the practice was reported. The standard deviation values provide information about the variability in the responses. These findings highlight a vigorous emphasis on pedagogical approaches aimed at equipping learners with the skills necessary to thrive in the VUCA world. Collaborative learning emerges as a cornerstone strategy in this endeavor. It fosters adaptability and resilience among learners (Alam and Mohanty, 2024). By encouraging collaborative problem-solving and shared goal achievement, this approach cultivates essential interpersonal skills vital for success in VUCA environments (Seow et al., 2019). For instance, engaging in collaborative multimedia projects necessitates effective communication across diverse cultural and linguistic boundaries. Through such collaborative endeavors, learners not only enhance their teamwork abilities but also develop the flexibility and cooperation essential for navigating the complexities inherent in VUCA settings (Baran and Woznyj, 2020).

Multimodal instruction accommodates diverse learning styles and preferences, enabling learners to engage with language in multiple ways (Ollerhead, 2019). Teachers may incorporate visual, auditory, and kinesthetic elements into their lessons to cater to different learning modalities (Cabual, 2021). By providing learners with varied learning experiences, teachers foster adaptability and resilience, equipping them with the skills they need to succeed in complex and uncertain environments (Williams and McEwen, 2021). On the other hand, language and intercultural competence development are fundamental for preparing learners to navigate diverse and ambiguous situations (Sercu, 2004). Teachers may design activities that encourage them to explore cultural nuances and perspectives, such as analyzing authentic texts or engaging in cross-cultural dialogues (Chen and Yang, 2016). By developing intercultural competence, they learn to navigate the complexities of global communication with sensitivity and respect for diverse perspectives (Lyu, 2024).

Global connections are essential for preparing learners to navigate the complexities of the globalized world (Stornaiuolo, 2016). Teachers may facilitate international partnerships and exchange programs that enable learners to interact with peers

from diverse cultural and linguistic backgrounds (O'Dowd, 2021). By engaging with global issues and perspectives, learners develop a broader understanding of the complexities of the world and the skills needed to navigate diverse and ambiguous situations (Hesse et al., 2015). Meanwhile, technology integration enhances language learning by providing learners with access to diverse resources and opportunities for collaboration (Ahmadi, 2018). Teachers may leverage virtual reality simulations to immerse them in culturally authentic environments or use online platforms for real-time communication with native speakers worldwide (Kessler, 2018). By integrating technology, teachers prepare them to navigate the complexities of digital communication and global connectivity in an increasingly interconnected world (Rahimi and Oh, 2024).

Reflective practice enables teachers to adapt and refine their teaching strategies in response to the evolving needs of their learners and the changing landscape of language education (Caena and Redecker, 2019). Teachers may engage in regular self-assessment and peer feedback sessions to identify areas for improvement and innovation (Ng, 2016). By reflecting on their practice, they cultivate the flexibility and adaptability needed to thrive in VUCA environments and continually enhance the learning experiences of their learners. Concurrently, continuous professional development is crucial for them to stay abreast of emerging trends and best practices in language education (Vadivel et al., 2021). They may participate in workshops, conferences, and online courses to enhance their knowledge and skills. By continually updating their practice, they ensure that they are well-equipped to prepare learners to thrive in VUCA environments and succeed in an ever-changing world (Shet, 2024).

Results suggest that language teachers created engaging, inclusive, and effective learning environments that promote language proficiency, intercultural competence, and lifelong learning skills. This is not merely coincidental but a deliberate manifestation of their commitment to staying abreast of contemporary instructional trends (Leung and Scarino, 2016). The observed convergence of these instructional practices is corroborated by extant research findings, thereby reinforcing the scholarly underpinnings of these approaches. These pedagogical trends resonate particularly with the goals and imperatives of language education in the VUCA world (Kukulaska-Hulme, 2021). This is in response to the evolving educational landscape and their adept incorporation of evidence-based methodologies (Muliani et al., 2024).

Additionally, language teachers serve as pivotal architects of learners' language learning experiences (Ekin et al., 2024). The transformative impact of these experiences extends beyond conventional linguistic acquisition. It encompasses a holistic preparation for the intricacies of the interconnected and rapidly changing world. This scholarly integration of practices resounds with the seminal

work of [Chun et al. \(2016\)](#), who underscored the indispensable role of language teachers in equipping learners with the adaptive skills necessary to thrive amidst the complexities of contemporary global dynamics. The intentional integration of pedagogical strategies positions them as key contributors to the broader educational discourse. This emphasizes the significance of lifelong learning skills in preparing learners to navigate the multifaceted challenges of a dynamically evolving sociolinguistic milieu ([Razmeh, 2024](#)).

Also, they "often practiced" flexibility in lesson planning (M=4.18, SD=0.18), cultivating resilience and adaptability (M=4.16, SD=0.03), problem-based and inquiry-based learning (M=4.14, SD=0.11), dynamic assessment (M=4.13, SD=0.06), and authentic and real-world language use (M=4.13, SD=0.05). The mean values indicate respondents' average rating for each practice, with higher mean values suggesting more frequent adoption of the practice. The standard deviation values provide insights into the variability of responses, with smaller values indicating higher consensus among respondents regarding the frequency of the practice. This assertion implies language teachers' sustained and intentional commitment to prioritize and consistently apply the identified pedagogical practices ([Wesely et al., 2024](#)). These efforts aim to empower learners to navigate the intricate terrain of linguistic and cultural challenges adeptly. They emerge as pivotal figures within an interconnected and dynamically evolving VUCA world. They play a crucial role in endowing learners with the indispensable skills and competencies for effective communication ([Emir and Yangın-Ekşi, 2024](#)). Specifically, flexibility in lesson planning becomes paramount as teachers adapt to unpredictable circumstances ([Bao et al., 2024](#)). For instance, a language teacher may design a lesson on business communication, but with sudden market shifts, they pivot to discussing how to negotiate unexpected challenges in international trade. This adaptability fosters resilience and prepares learners for the uncertainties they may encounter in their future careers ([Green et al., 2020](#)).

Cultivating resilience and adaptability is a central goal of language education in VUCA environments ([Mahel, 2021](#)). Teachers may design activities that challenge learners to step outside their comfort zones and confront linguistic and cultural uncertainties ([Henriksen et al., 2021](#)). For instance, learners may participate in language immersion experiences or engage in cross-cultural exchanges that require them to navigate unfamiliar contexts. Through these experiences, learners develop the resilience and adaptability needed to thrive in diverse and unpredictable environments ([Besser et al., 2022](#)). Also, problem-based and inquiry-based learning approaches engage learners in critical thinking and problem-solving, essential skills for navigating VUCA environments ([Chan et al., 2022](#)). For example, learners may analyze authentic case studies or current events to explore language-related

challenges in cross-cultural communication. Through inquiry-based learning, they develop the ability to identify and address complex language issues, preparing them to navigate the uncertainties of global communication ([Ko and Luna, 2024](#)).

Dynamic assessment methods provide teachers with valuable insights into learners' abilities to navigate uncertain and complex language tasks ([Jeon, 2023](#)). For example, teachers may use performance-based assessments that require learners to demonstrate their language skills in authentic contexts, such as role-plays or multimedia presentations. By assessing learners' abilities to apply their language skills in diverse and unpredictable situations, teachers prepare them to thrive in VUCA environments ([Mahel, 2021](#)). Likewise, authentic and real-world language use is central to equipping learners with the skills they need to thrive in diverse contexts ([Trang and Phuong, 2023](#)). Teachers may incorporate real-world tasks such as conducting mock job interviews or participating in simulated business meetings to provide learners with practical language experiences ([Oglu, 2023](#)). By immersing learners in authentic situations, they gain confidence and proficiency in using the language effectively, preparing them for the complexities of the global marketplace ([Ye, 2024](#)).

Language teachers, as highlighted in the work of [Shliakhovchuk \(2021\)](#), are key contributors to the development of learners as engaged learners, adept critical thinkers, and language practitioners in real-world scenarios. By prioritizing student engagement, they stimulate active participation and sustained interest, fostering an environment conducive to deep learning ([Lasekan et al., 2024](#)). Cultivating critical thinking skills emphasizes their commitment to transcending mere rote memorization ([Van Le and Chong, 2024](#)). It encourages learners to analyze information, make informed decisions, and effectively apply their language proficiency in authentic situations.

Language teachers emerge as catalysts in shaping learners into competent and confident language learners ([Sak, 2024](#)). They are prepared to navigate the complexities in an interconnected VUCA world ([Shet, 2024](#)). This signifies language teachers' dedication to nurturing individuals capable of thriving in the multifaceted challenges presented by the rapidly changing global landscape ([Nor et al., 2024](#)).

5. Conclusion

The findings highlight that language teachers possess significant knowledge and positive perceptions in integrating VUCA elements in language teaching. They collectively understand their significance in the learning experience and recognize relevance and benefits in the classroom. They are willing to adapt instructional practices to better equip learners with the necessary skills and competencies to succeed in dynamic and uncertain

environments. By integrating VUCA elements, language teachers enhance student engagement, critical thinking, problem-solving abilities, adaptability, and resilience. It also creates a more authentic and meaningful learning environment that

mirrors real-world complexities and challenges. This highlights their dedication to fostering abilities to thrive in an ever-changing global landscape, reflecting their commitment to preparing learners for future success.

Table 3: Teachers' practices

Category	M	SD	Interpretation
Flexibility in lesson planning	4.18	0.18	Often practiced
Authentic and real-world language use	4.13	0.05	Often practiced
Problem-based and inquiry-based learning	4.14	0.11	Often practiced
Technology integration	4.24	0.10	Always practiced
Collaborative learning	4.48	0.00	Always practiced
Language and intercultural competence development	4.30	0.11	Always practiced
Reflective practice	4.23	0.16	Always practiced
Dynamic assessment	4.13	0.06	Often practiced
Multimodal instruction	4.37	0.06	Always practiced
Cultivating resilience and adaptability	4.16	0.03	Often practiced
Global connections	4.25	0.05	Always practiced
Continuous professional development	4.23	0.14	Always practiced

Always practiced: 4.21–5.00; Often practiced: 3.41–4.20; Sometimes practiced: 2.61–3.40; Occasionally practiced: 1.81–2.60; Never practiced: 1.00–1.80

Language teachers integrate VUCA elements through consistent practices such as collaborative learning, multimodal instruction, intercultural competence development, global connections, technology integration, reflexive practice, and continuous professional development. These practices create engaging, inclusive, and effective learning environments that promote language proficiency and lifelong learning skills. The alignment with current trends and research highlights the crucial role of language teachers in preparing learners to thrive in a rapidly changing world. Their commitment to flexibility, resilience, problem-based learning, dynamic assessment, and real-world language use empowers learners to navigate linguistic and cultural challenges, fostering critical thinking and effective communication in the VUCA context. The findings provide a roadmap for teachers to enhance the authenticity and relevance of learning environments by aligning them more closely with the complexities of the real world. The comprehensive knowledge demonstrated by language teachers validates the feasibility of VUCA integration. It positions them as architects capable of designing and implementing learning experiences that mirror the intricate challenges learners are likely to encounter beyond the classroom. This research, therefore, offers tangible guidance for language teachers seeking to adapt their instructional practices to effectively prepare learners for the multifaceted demands of a VUCA world that fosters a more dynamic and responsive approach to language education.

Future research directions could explore the sustained impact of the practices over time, the comparative effectiveness across diverse educational contexts, and the role of emerging technologies in augmenting the integration of VUCA elements. Additionally, investigating the interplay between individual teacher characteristics and adopting the practices could provide a deeper understanding of the inherent in language teachers' engagement. Challenges faced by language teachers and the barriers they encounter in integrating the elements

may be considered for exploration to develop interventions and support mechanisms for empowerment. Hence, scholars can contribute to the ongoing discourse on effective instructional practices, shaping the trajectory of language education in the face of an ever-changing global landscape.

Compliance with ethical standards

Ethical considerations

This study was approved by the institutional review board of Northern Iloilo State University. Informed consent was obtained from all participants. Confidentiality and anonymity were ensured by anonymizing data and securely storing information.

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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