

LEADERSHIP COMPETENCIES: TECH-SAVINESS, RISK AND CONFLICT MANAGEMENT CHALLENGES TO HIGHER EDUCATION IN A VOLATILE, UNCERTAIN, COMPLEX, AND AMBIGUOUS (VUCA) ENVIRONMENT

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Abstract

The coaster-roller situations that challenge contemporary educational systems have created a surge for investigating if modern education leaders possess the required leadership competencies that may empower them to function effectively and efficiently in world of precariousness. Incessantly, the gravity of the challenges such as environmental volatility, uncertainty, complexity, and ambiguity (VUCA) has reshaped where and how education activities should be done. Likewise, the challenges of leaders tech-saviness, and risk and conflict management of internal and external threats and conflicts have adversely impacted how teachers perform their pedagogical practices.

It follows that leveraging from the COVID-19 pandemic which has autocratically forced education practices out of its traditional context and students' learning trajectories, there is need to explore how this precipitating environmental and social dichotomy trammled school teaching strategies, cultural values, and students' diversity challenges are perceived by educators in higher education environments.

The quantitative method, descriptive research design, and random sampling techniques were used as the compass to steer the study. The study findings showed that the leadership competency dimension of tech-saviness had the highest overall mean score, whereas risk and conflict management got the lowest overall mean score.

The implication of the study findings is that higher education leaders need to be aware that epistemologically, it is not enough to have abstract knowledge of a cluster of leadership skills in leading today and future higher education institutions when linking VUCA challenges and pandemic crisis simultaneously.

Consequently, synergizing and rethinking the demands of technology, teachers professional teaching enhancement and parental engagement may help position leaders in fighting the present challenges of volatile, uncertain, complex, and ambiguous economic, social, cultural, and political instability impacting higher education institutions management and sustainability.

Key Words: Leadership Competencies, Tech-saviness, Risk and Conflict Management, Institutional Cultural Values, Students Diversity

Introduction

The challenges higher education institutions encounter nowadays because of the volatility in global and national economy, uncertainty in what tomorrow holds, complexities associated international and national policies, human behavior, and ambiguities seem to paralyze leadership competencies to lead schools effectively and efficiently. Besides, these leadership challenges and the lack of competency in risk and conflict management fosters unsuitable working and learning conditions. For instance, Carvan (2015) submitted that leaders attest they have not either the right leadership or the capacity to develop the right leaders at multiple levels in the organization (Carvan, 2015).

Leadership Tech-savviness competency

Moreover, tailoring from tech-savviness or technologies, scholars have found that administrators are apprehensive about social media in the classroom (Uğur & Koç, 2019). Consequently, there is a surge for school leaders to become intrinsically interested and adopt a learning approach to model technology acumen in institutional administrative practices. Accordingly, the global digital economy is prescribing and forcing colleges and universities to move from formal traditional roles of teaching and learning into redefining institutional innovation, entrepreneurship, creativity, and marketing (Wihlborg & Robson, 2018).

Also, the globalization of connected networks based on information and communications technologies created change on an unprecedented scale where technology-enabled complex data transfers and information access become essential to knowledge-intensive production (Muharlisiani, 2018). Besides, Bass and Eyon (2017) found that the world's economy, increasingly diverse populations, and the issue of the pervasive use of technology affect higher education in a myriad of topics (Bosire & Amimo, 2017).

However, Bano and Taylor's (2015) research findings suggested that the emergence of new digital technologies offers tremendous opportunities which leaders, individuals, and groups with the ability to modify and adapt could utilize in performing their job functions. Similarly, it was advocated that the capacity to adapt technologically could help higher education leaders in creating greater access to education, new markets for distribution, and expanded income opportunities for higher education institutions (Bano & Taylor, 2015; Malureanu, Panisoara, & Lazar, 2021; Shank 2019).

Leadership risk and conflict management competency

Risk and conflict management is a phenomenon that cannot be avoided as a way of life. Much more in a VUCA world, higher education leaders should be prepared to embark on purposed and well-calculated risk and conflict management leadership practices that may help mitigate against internal and external disruptions such as employees' grievances.

Historically, Arena et. al. 2010 as cited in Yang et al. (2018) suggested that interest in enterprise risk management (ERM) has been growing since the 1990s as businesses face several shocks in competitive environments (Arena et al. 2010 as in Yang et al. 2018). In response to unexpected threats, one school of thought believed in the direct impact of enterprise or organizational risk management on firm performance (Callahan & Soileau 2017;

Florio & Leoni 2017) while another group of researchers claimed that the relationship of ERM and firm performance could be affected by some internal factors (Khan & Ali 2017).

Although, Florio and Leoni (2017) and other researchers have discussed the importance of ERM practices among businesses (Eckles et al. 2014; Yilmaz & Flouris 2017). However, Florio and Leoni (2017) identified that most of the studies have been conducted particularly in developed economies while organizations in emerging economies have received comparatively limited attention (Yang, Ishtiaq, & Anwar, 2018). Additionally, empirical studies on the relationship between organizational risk management and emerging enterprises' (higher education institutions) performance are still lacking (Farrell & Gallagher, 2015).

Nevertheless, risk management should function as a “Revealing Hand” (Kaplan & Mikes, 2016) to identify, assess, and mitigate risks in a cost-efficient manner especially when translating into a higher education environment in a VUCA context. Apparently, when done well, the revealing hand of risk management may add value to higher education leaders by allowing them to take on riskier projects and strategies. But risk management to be effective in a complex organizational context, it must overcome severe individual and organizational biases that prevent leaders, managers, and employees from thinking deeply and analytically about their risk exposure (Kaplan et al. 2016).

Furthermore, Songling, Ishtiaq, Anwar, and Ahmed (2018) study results indicated enterprise risk management practices significantly influenced the competitive advantage and small and medium-sized emerging enterprises (SME) performance. It was also found that competitive advantage partially mediated the relationship between enterprise risk management practices and small and medium-sized emerging enterprises' performance (Songling et al. 2018). Additionally, it was observed that financial literacy significantly moderated the relationship between enterprise risk management practices and competitive advantage (Songling et al. 2018).

However, Bombiak (2018) research conducted with the application of a diagnostic survey, it was concluded that although managers had significant potential for the management of human resource risk management, it was not used to a full extent in all of the analyzed organizations. Furthermore, the analysis showed that a barrier limiting effective human resources risk management-oriented at generating an added value was created by negative attitudes, such as perceiving human resources risk mainly as a threat and striving to avoid it (Bombiak, 2018).

Additionally, the concept of risk management has been applied to many aspects of modern life such as banking, finance, health, life, business ventures, and project management. It is attracting a lot of attention in universities in terms of academic researches, courses, and degrees offered (Sum & Saad, 2017). Accordingly, the University Transformation Program Green Book highlighted that risk and risk management is one of the duties and roles of universities' board of directors. But it was observed that risk management is missing from most aspects of the management of universities (Sum & Saad, 2017).

Telescoping from the construct of organizational conflicts, it is apparent that the wide range of behavioral, philosophical orientations and cultural differences among people breeds a fertile environment for conflicts to manifest. Although theoretical conflicts may be constructive or destructive. Aligning with constructive theory, substantive and task-relative conflicts can be constructive and promotes opportunity for meaningful dialogue in

organizations. Conversely, affective conflicts are typically always destructive because it diminishes employee's satisfaction and commitment. However, the lack of conflict may signal the absence of effective interaction (Smiley, 2018).

Nevertheless, conflict should not be considered good or bad, rather it may be viewed as a necessity to help build meaningful relationships between people and groups. Apparently, this means that how the conflict is handled by leaders in higher educational setting determines whether it is productive or devastating. Although it's obvious that conflict has the potential to create positive opportunities and advancement towards a common goal (Smiley, 2018). Nonetheless, conflict can also devastate relationships and lead to negative outcomes (Kazimoto, 2013; Evans, 2013).

It follows that contemporary higher education leaders are expected to lead change, development, and transformation in higher education institutions and environments plagued with high-level volatility, uncertainty, complexity, and ambiguity. Unfortunately, Guttman (2004) as cited in Smiley (2018) attested that an under-reported aspect that is not commonly discussed among leadership qualities is the ability to handle conflict (Guttman, 2004). Likewise, Guttman elucidated that leaders may have a fatalistic attitude towards conflict and that leaders may equally look at conflict as a situation that will never be resolved (Guttman, 2004).

Conversely, there is a realization that conflict management should be a skill that leaders need to give priority to learning and mastering (Kazimoto, 2013). This is imperative because the inability of a leader to deal with conflict will not only lead to negative outcomes but may also undermine the credibility of the leader (Kazimoto, 2013). Similarly, Northouse (2016) suggested that "to be an effective leader, one needs to respond with the action that is required of a threatening functional work situation."

Consequently, this demonstrates that the job of a leader is to analyze a conflict and facilitate the situation to produce a resolution that can be positive and productive. Interestingly, Northouse reassures us that any leader can draw on his/her leadership skills to employ appropriate conflict management strategies (Northouse, 2016).

The implication is that effectively managed conflicts can lead to a resolution that results in positive outcomes and productivity for the team and/or organization (Evans, 2013). Hence, the relevance of the risk and conflict management leadership competency concept inclusion is pertinent in the noble study. Still, it is apparent that leadership practices do not occur in a vacuum but its effect transcends into organizational processes, operations, and working conditions of the employees.

As for this study, higher education teachers and students are the direct channels of consideration on how leadership practices influence the cultural values that permeate in the institutions and students' diversity come to the front-line on exploration.

Institutional Cultural Values

Recent decades have witnessed a significant increase of scholarly interest in the role that culture plays for the economic success of nations. Especially the notion that individualistic values, in contrast to collectivistic values, are conducive to long-run development has found a positive reception in the literature. However, a collaborative and supportive culture encouraged teachers to identify knowledge gaps and learn together.

Sometimes this meant adopting a new perspective as they came to realize they could make a difference, and that no child should be expected to fail.

Accordingly, Solomanidina (2007) as cited in Vasyakin, Ivleva, Pozharskaya, and Shcherbakova (2016) posited that organizational culture is the company's social and spiritual field, shaped by material and non-material, visible and disguised, conscious and unconscious processes, and a phenomenon that together determines the consonance of philosophy, ideology, values, problem-solving approaches and behavioral patterns of the company's personnel, and is capable of driving the organization towards success (Solomanidina, 2007).

Subsequently, helping employees internalize corporate values to make them feel personal and synergistically aligned with the company's values has a pronounced positive effect on the organization's performance (Posner, 2010) especially that gravity VUCA challenges that penetrating the corridors of higher education institutions.

For instance, Pitlik and Rode (2016) paper investigated the impact of individualist values on personal attitudes towards government intervention, as a potential link of culture and formal institutions. The results indicated that values related to self-direction and self-determination of individualistic values were significantly associated negatively with interventionist preferences.

Unfortunately, it was observed that the effects of self-direction values on intervention attitudes were much weaker though, than the effects of a strong belief in self-determination. Moreover, the effects of self-direction on intervention preferences were mitigated through higher trust in state actors and lower confidence in major companies, while that does not appear to be the case for self-determination values (Pitlik et al. 2016).

However, according to Gorodnichenko and Roland (2015a, 2015b), the key economic characteristic of individualistic cultures is to reward personal endeavor and effort, innovation, or other achievements, with higher social status. Collectivism instead fosters conformity and internalization of collective goals but discourages individuals from striving for outstanding results. Gorodnichenko and Roland (2015b) also find individualistic values to be positively related to the development of democratic institutions.

Moreover, Howell and Shepperd (2012) noted that the particular ways in which organizational culture affects company employees as members of a specific community also include the effect it causes on their work attitude, their sense of obligation and responsibility towards their colleagues and the entire organization (Howell et al., 2012). However, Grigoryan, (2015) suggested that it is important to ultimately emphasize that, a key integral part of organizational culture is the state of its ecology of communication, both between individuals and within a group (Grigoryan, 2015).

Students' Diversity

Education and how educational processes are administered have changed due to the inception of international students crossing borders to pursue their tertiary education away from the respective countries. Consequently, higher education cultural and social environment in conjunction with the policies that govern the institutions has changed in order to accommodate the trends of student mobility.

Furthermore, that has created an atmosphere whereby student bodies become increasingly diverse. Therefore, in order for every student to gain the mission and goal of their learning, it is important for faculty members to understand the dynamics associated with diverse campuses and also exploit diversity rich social classroom environment to promote students' learning and development psychologically, emotionally, and culturally.

The implication is that the way faculty members engage with students' diversity in the classroom environment plays a critical role in student experiences, satisfaction, and learning outcomes and that consequently determines the reputation and credibility of the institution.

Possi and Milinga (2017) research on learner diversity in inclusive classrooms focusing on the language of instruction, gender, and disability issues findings indicated challenges facing teachers in teaching mixed classes as well as students in such classes; especially those with disabilities. However, interactions between girls and boys were generally positive although the latter dominated in some classroom conversations (Possi et al. 2017).

Thomas (2016) study examined the impact of diversity on student engagement and academic success within a university setting. The results found out those Hispanic college students reported more frequent experiences with diversity than did their Black or White peers. Likewise, a moderated regression was conducted to examine the relationship between experiences with diversity and academic success (GPA), the results found no significant relationship between diversity experiences and GPA, regardless of gender, race/ethnicity, or generational status (Thomas, 2016).

However, Cole and Zhou (2014) conducted a three-year longitudinal study at one institution that examined the extent to which experiences with diversity improved college students' orientation toward civic-minded activities. Using a sample of 447 undergraduate senior students, including 144 ethnic minorities, Cole and Zhou conducted a regression analysis and found that students with higher levels of experiences with diversity, (interracial social interactions, student-faculty interactions, and service-learning), had a significantly higher level of civic-mindedness. These findings suggest that students with higher levels of diversity experiences gain positive benefits, such as increased civic awareness and participation.

Furthermore, diverse interactions have been connected to positive student development in a variety of domains (Jones, 2015; Pike & Kuh, 2006). Similarly, according to Jones (2015), "higher levels of interactional diversity have been correlated with increased cultural knowledge, greater cognitive and affective development, more positive intergroup attitudes, increased critical thinking skills, increased intellectual and social self-confidence, and greater student satisfaction with the college experience". Given the benefits of interactions between diverse students, more attention needs to be paid to the quantity and quality of these interactions.

According to Bowman and Park (2014), "Research on diversity in higher education has evolved to consider the nature of interracial contact and campus climate and the factors that may foster meaningful interactions." Likewise, another study has examined the impact of experiences with diversity outside the classroom (Thomas, 2016). Also, research on diversity in higher education has evolved to include comparisons between different racial/ethnic groups and examinations beyond race. For their study, Bowman and Park examined two types of interracial contact on college campuses: cross-racial interaction (CRI) and interracial friendship (IRF).

The purpose of the Bowman and Park (2014) study was to better understand the behavioral dimensions of students' experiences with diversity. Accordingly, Bowman and Park noted previous research findings that suggest CRI and IRF types of student engagement occur in different ways for students of different gender and racial/ethnic backgrounds.

Besides, percolating issues that higher education leaders battle with today ranges from the volatile financial environment, the rise of international partnerships, greater accountability pressures, the need for new business models. Likewise, new technologies, and changing demographics of students are just some of the challenges, which call for leadership solutions that are tested both inside and outside of higher education (Kezar & Holcombe, 2017).

Taken together, this study explored leadership competencies in terms of tech-savviness, risk and conflict management challenges to higher education institutions in a volatile, uncertain, complex, and ambiguous (VUCA) environment in relation to teacher and students identified areas in the VUCA environment as perceived by university teachers.

Sequel to the literature reviewed, empirical evidence shows that leaders' competencies are highly needed for effective leadership functions. The urgency of this quest on either corporate organizations or institutions leaders is heightened by volatility, complexity, uncertainty, and ambiguous nature of the risks that threaten the stability of social, political, and cultural environments that schools are located.

Besides, the reviewed pieces of literature and studies to some extent are similar to the current study because they touched in one aspect of this study on leadership competencies. Moreover, there are differences between the past studies and the present study because the majority of the reviewed studies and journal articles were carried in the United States of America, United Kingdom, Europe, Middle East, Africa, etc. which does not portray how the 21st-century leaders' competencies identified influences on higher education institutional cultural values and students' diversity in the Philippines.

These studies demonstrated the importance of unavoidable change of leaders' traditional leadership approach and hierarchical and bureaucratic leaders' methods to embrace contemporary competencies which are found significant to address organizational and educational challenges in a world of VUCA and further show that leadership forms a crucial aspect in achieving organizational goals and objectives.

Lastly, a number of practitioners have contributed to this review, based upon their expertise primarily in the field of organizational and educational management and leadership styles and employees' support practices. But no known past study has explored the impact of leaders' competencies in terms of tech-savviness, and risk and conflict management on higher education institutions institutional cultural values and students diversity in a higher education institutions context and particularly in South Manila Education Consortium member universities, Philippines.

Hence, to close this gap in the extant literature and to contribute to the field of educational management and leadership practices of higher education institutions engineers the impetus for this present study.

As to gain a broader understanding of the constructs, the quantitative research approach, descriptive and correlational research design and random sampling technique was used in the study. However, the study was guided by these research problems.

1. What are the perceptions of the teachers on leaders' leadership competencies in terms of risk and conflict management?
2. How does the teachers assess the following in higher education institution VUCA environment in terms of:
 - 2.1. Institutional cultural values; and
 - 2.2. Students' Diversity?
3. Is there a significant difference in the rating of the respondents on the leadership competency when grouped by school?
4. Is there a significant relationship between leadership risk and conflict management competency and identified areas in VUCA environment indicators?

Hypothesis

H1: There are no significant differences between the ratings of the respondents on the leadership competency when grouped according to school.

H2: There is no significant relationship between leadership risk and conflict management competency and institutional cultural values and students' diversity.

Methodology

The chapter included the research design, respondents of the study, sampling technique, research instruments, data gathering procedure and statistical treatment, scales validation, and reliability testing, and ethical considerations. According to Kothari (2004), as cited in Chelimo (2017), research methodology is the systematic, and theoretical analysis of the procedures applied to a field of study.

In this study, the quantitative research method was used because it deals with numbers to explain findings (Kowalczyk, 2016). Using numbers implies that the researcher has a good knowledge of both descriptive and inferential statistical parameters, statistical calculations and interpretations of standard deviations, ANOVA, correlations, etc. (Center for Research Quality, 2015a).

Whereas both descriptive and correlational research designs were used in the interpretation and discussion of findings. Burns and Grove (2003) as cited in Chelimo (2017) define research design as a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings. Interestingly, Kothari adds that the research design is the conceptual structure within which research is conducted and it constitutes the blueprint for the collection, measurement, and analysis of data (Kothari, 2004).

The descriptive design is preferred since it allows the use of quantitative or qualitative elements within the same study. It also often uses visual aids such as graphs and charts thus interpretation and presentation of data are simplified. Whereas correlations indicate the relationship between paired scores (Ary, Jacobs, Sorensen, & Walker, 2014), and in the correlational study, the goal is to explore relationships between independent and dependent research variables (Creswell, 2005).

Consequently, a correlational research design was appropriate for this study because data could be statistically analyzed to identify whether or not higher education leadership competencies influence directly or indirectly respondents' institutional teaching strategies, and the institutional challenges teachers encounter. More specifically, Pearson *r* (Bivariate) as a type of correlational procedure that evaluates relationships among several variables was used (Ary et al., 2014).

The respondents of the study were university teachers (instructors) from selected South Manila Education Consortium member universities operating within Taft Avenue, National Capital Region (NCR) Manila, Philippines while the researcher used the simple random sampling technique which gives equal chances to the respondents to be included in the study. In a simple random sampling technique, according to Alvi (2016), the population must contain a finite number of elements that can be listed or mapped. Apparently, this implies that the population must be homogenous or consistent and every element contains the same kind of characteristics that meets the described criteria of the target population such as the university teachers within a geographical setting as for this study (Alvi, 2016).

In this study, the total sample size was determined through the use of the Krejcie and Morgan (1970) table for determining sample size. The respondents were one hundred and eighty-four (N=184) that took part in the study. Out of the one hundred eighty-four respondents, eighty-two (44.6%) were male while one hundred and two (55.4%) were female.

The research questionnaires were researcher-developed from the literature review and theoretical conceptualization in relation to the study indicators. The first part was on the leadership competencies which include tech-savviness (digital), whereas the second part centered on institutional teaching strategies and institutional challenges encountered by teachers.

The questionnaires were duly piloted with a total of thirty university teachers before it was administered to the target study respondents. Accordingly, the Leaders' self-confidence leading in complex and ambiguous situations competency was assessed on 12 items and a five-point level of agreement or disagreement with a Cronbach alpha of .972. While Leadership Tech-Savviness (digital) Competency Scale was used to assess the leadership inclinations and activities with an overall alpha coefficient for the dimension reliability of ($\alpha = 0.973$). The risk and conflict management competency was assessed with the use of the Leadership Risk and Conflict Management Competency Scale. The questionnaire assesses risk and conflict management with 17 items on a 5-point Likert scale. The questionnaire Cronbach alpha was found to be highly reliable with a Cronbach alpha of .917.

Institutional Cultural Values Scale was used to measure the higher education institutional cultural values promoted by the leaders in their institutions as perceived by the teachers. The scale reliability Cronbach alpha was .917. Whereas the Students' Diversity Questionnaire was used to assess the perceptions of teachers on how leaders and teachers embrace and promote student diversity. The scale reliability Cronbach alpha was .913.

RESULTS

This study sought out to explore the leadership competencies, tech-savviness, and risk and conflict management challenges to higher education institutions in a VUCA environment in relation to institutional cultural values, and students' diversity operations, effectiveness,

and efficiency. Accordingly, this section discusses the results of the study data analysis, and tables were used for visualizations of the results.

Table 1.			
Mean Rating Summary on Leadership Competencies (N=184)			
Scale Indicators	Mean	SD	Verbal Interpretation
Tech-savviness	4.13	.644	Very High
Risk and Conflict Management	3.93	.618	Very High

SD: Standard deviation

The results show that tech-savviness had the highest mean score of (m=4.13, SD. = .644), whereas risk and conflict management got the lowest mean score of (m= 3.93, SD. = .618) correspondingly. These results could be interpreted as a very high level of competencies on the observed constructs.

Table 2			
Mean Rating Summary on VUCA Teacher Assessment (N=184)			
Scale Indicators	Mean	SD	Verbal Interpretation / Descriptive Equivalent
Institutional cultural values	3.70	.631	Very High
Students' diversity	4.04	.577	Very High

SD: Standard deviation

Table 2 findings showed that students' diversity got the highest mean score of (m=4.04,SD.= .577), conversely, institutional cultural values had the lowest mean score of (m=3.70, SD. =.577). Nevertheless, stitching the results together, it shows that the participants perceived their leaders and themselves as having a very high level of cultural values and mobilizes student's diversity to enhance pedagogical practices.

Table 3.

Mean Significant Differences on Leadership Competencies (N=184)						
Variables	Schools	Mean Scores (SD)	F-value	P-value	Decision	Interpretation
Tech-savviness	School 1	4.08 (.715)	1.107	.348	Accept	Not Significant
	School 1	4.10 (.677)				
	School 3	4.34 (.456)				
	School 4	4.18 (.635)				
Risk and conflict management	School 1	3.97 (.730)	.053	.984	Accept	Not Significant
	School 1	4.02 (.692)				
	School 3	4.09 (.512)				
	School 4	4.15 (.561)				

H1: No significant mean variances, therefore, the null hypothesis was accepted

Table 3 results on the one-way analysis of variance conducted to evaluate the null hypothesis revealed that there was not a significant differences between mean ratings of the respondents when grouped and compared according to institutional affiliations on tech-savviness [F (3, 180)= 1.032, p=.348], and risk and conflict management [F (3, 180)= .053, p=.984] respectively.

Accordingly, the one-way analysis of variance conducted on tech-savviness leadership competency findings showed there were no significant differences between the mean ratings of the respondents on tech-savviness leadership competency when grouped and compared according to institutional affiliations.

The assumption of normality was evaluated using histograms and found tenable for all groups. The assumption of homogeneity of variance was tested and found tenable using Levene’s Test, F (d=3) =1.032, p= .380. The Levene’s test verified that if the p-value is above 0.05, the alternate hypothesis is rejected and it shows there is an equality of variance (Martin & Bridgmon, 2012).

In the same manner, the findings on risk and conflict management competency, one-way analysis of variance were conducted displayed that there was not a significant difference between the ratings of the participants on the leading risk and conflict management competency when grouped according to institutional affiliation.

The assumption of normality was evaluated using histograms and found tenable for all groups. While the assumption of homogeneity of variance was tested and found tenable using Levene’s Test, F (3) =1.382, p= .250. Levene’s test verified that if the p-value is above 0.05,

the null hypothesis should be accepted and it shows there is an equality of variance (Martin and Bridgmon, 2012).

Table 4

Correlation between Independent and Dependent Variables					
Variables (IV)	DV	Pearson-r	P-value	Decision	Interpretation
Tech-savviness	ICV	.126	.087	Accept	Not Significant
	SD	.626**	.000	Reject	Significant
Risk and conflict management	ICV	.312**	.000	Reject	Significant
	SD	.465**	.000	Reject	Significant

**Correlation is significant at the 0.01 level (2-tailed).

H2: Significant relationships found, therefore, the need to reject the null hypothesis.

Table 4 findings revealed the correlation between tech-savviness and ICV, and SD. The results were: ICV ($r=.126, p=.087$), and SD ($r=.593, p=.000$). This disclosed that there was a strong and positive significant relationship at the 0.01 level of significant (2-tailed) between tech-savviness and students’ diversity. However, there was not a significant relationship between tech-savviness and institutional cultural values. Hence, the decision to reject the null hypothesis on SD, while accepting the null hypothesis on ICV. Also, the table disclosed there was a significant relationship between risk and conflict management and ICV, and SD. Hence, there was evidence to reject the null hypothesis.

Discussion

The goal of this investigation was to explore and determine leadership competencies in terms of tech-savviness, and risk and conflict management challenges to higher education institutions in a VUCA environment and its significant variances when grouped according to schools and associations to institutional cultural values, and students’ diversity.

Accordingly, the findings revealed that the higher education leadership promote and enforce privacy, security, and online safety related to the use of technology in the respective institutions. Similarly, the results indicate that leaders promote and enforce environmentally safe and healthy practices in the use of technology. In the same manner, the participants perceived their leaders as having the tech-savviness competency to identify, use, evaluate, and promote appropriate technologies to enhance and support instruction and curriculum.

Also, it could be inferred that the leaders could integrate strategic plans, technology plans, and other improvement plans and policies to align efforts and leverage resources to overcome VUCA challenges. The study findings were affirmed by Laurenceau et. al. (2016) results which suggested that the digital journey offers tangible benefits to business leaders and is being even more positively embraced by their employees.

However, this was contradicted by the Global Leader Forecast 2018 report which showed that only 22 percent of digital-era leaders considered themselves effective in driving digital by leveraging technology to modernize their business strategy and operations (Dettmann et. al. 2018).

Furthermore, the very high mean scores on risk and conflict management denote that the participants perceived their leaders as having the competency to negotiate and find resolutions on institutional conflictual challenges. Conversely, Almeida (2017) suggested leadership problems in spatial planning tend to be even more complex and difficult to solve regarding the transition from a traditional and linear planning system to a collaborative planning system. Similarly, the findings was collaborated by the Head and Alford (2008) results that problems that have a very high degree of complexity and diversity can further the emergence of intractable conflicts. That was in congruence with the study by Almeida (2013) which showed that tourism vs. territory conflict was an intractable conflict, and therefore, difficult to resolve.

Moreover, the findings revealed that higher education institution leaders possessed risk and conflict management competency. Consequently, this means that the leaders understand the contribution that risk management as practice makes in reaching objectives. Likewise, the results indicated that the leaders tried to utilize a win-win solutions approach to disagreements which the researcher identified as essential in risk and conflict management in a VUCA environment.

Hence, it could be inferred that there was the presence of risk and conflict management awareness in the institutions. This, in essence, negates Sum et al. (2017) who posited that risk management is missing from most aspects of the management of universities. Therefore, it could be said that the higher education institution leadership implemented risk within an integrated approach to their quality assurance regime or strategic planning framework.

Furthermore, the effective management of risk and conflict accrues to cost-effective management of institutional resources; greater efficiencies in the use of constrained resources, and maintaining competitive advantages thereby resulting in enhanced use of existing applications while eliminating paying fines for regulatory non-compliance.

In addition, there is the benefit of enhanced capital and reduced loss of assets; reduced cost of turnover by avoiding employment liability exposures; enhanced communications systems across departments, and reduced claims or operational losses by enhanced loss prevention (Brewer & Walker, 2011). Apparently, the findings suggest that leaders must let go of the notion that they alone are the “deciders” and learn how to convene diverse groups to share information and perspectives about pressing campus issues (Mrig et. al. 2017).

Besides, the results showed the respondents observed institutional culture values were embedded in-group cohesion rather than individualistic culture. Based on this concept of group cohesion, it is hoped that higher education leaders and teachers would capitalize on the result to propagate an effective culture of collegiality in order to effectively and efficiently improve teachers, students, and other employees' performances.

In support of this finding, Purwani and Martin (2018) found a positive direct effect of group cohesiveness on teachers' productivity in a state senior high school in Indonesia. The findings were further affirmed by Bukhuni and Iravo's (2015) study that showed school values such as respect for others and employee collaborations enhanced the achievement of organizational goals.

Moreover, the study findings indicated that the respondents strongly agreed there was a "Very High" level of friendliness among people. This is important in a volatile, complex, uncertain, and ambiguous environment of higher education institutions. The implication is that such affinity is capable of bridging isolationism that devalues institutional cooperation and collaboration and engagement of employees.

Similarly, the results revealed that there was a desire for people to decrease power distance between leaders and teachers. This indirectly implies that the respondents strongly perceived and observe that powerful members of the institutions practiced or upheld a culture whereby power is distributed unequally (Hofstede, 2010). These findings implicate the notion that in high power distance society, inequalities among people are both expected and desired where less powerful people should be dependent on more powerful people.

Therefore, the researcher suggests that leaders must change this attitudinal culture of power monopolization if they expect the full support of teachers and students in the achievement of institutional goals and objectives.

In fact, empirical studies have shown that without a change in organizational culture, organizations cannot expect to pursue and achieve a meaningful improvement in organizational performance (Cameron & Quinn, 2006 in Bukhuni et. al. 2015). Conversely, in a low power distance society, the egalitarian nature of engagement in social interaction and less receptive to power inequalities are the quests for societal satisfaction and cultural norms.

In consonance with the study findings, it could be understood that teachers assume a power position, and students are required to treat teachers with respect (Kaur, & Noman, 2015). This equally implies that the teachers rely mainly on a transmission mode of transferring knowledge. While the students are dependent on the teacher. Apparently, that bars all door for questioning teachers' wisdom or debating with a teacher is not appreciated. These findings reveals a practical implication whereby classroom discussions are mainly in the form of clarification, not debate (Keith, 2012; Signorini, Wiesemes, & Murphy, 2009).

Though, power distance can also be partially explained by objective career success in relation to the implication of employees' occupational self-efficacy and career goal. Nevertheless, these findings suggest that the leaders should promote flexible faculty professional development practices which may help to delimit the issue of power distance among leaders and employees.

Besides, the results showed that there was a very high level of collectivist culture in higher education institutions. This means that the institutions emphasized bonding between individuals, belongingness to groups, and harmonious relationship among faculties. But in practice, the findings betray the assumption and indicate that collectivist teachers may embrace individualistic practices of teaching which are congruent with their own cultural beliefs (Hofstede, 1980, 2001).

Also, drawing from the study findings, it appears that the respondents strongly agreed that collective acceptance and submission to the values, standards, attitudes, and behavior patterns will have a positive impact on the organizational culture mutually perceived and shared by the employees (Szczepanska, 2017).

Thus, the findings add to the literature on cultural beliefs that affect teaching and learning. The findings obviously have implications for teachers, researchers, and policymakers in refining their perception of collectivist cultures in this era of higher education VUCA challenges. In addition, the participants reported a very high level of assertiveness and humane orientation in the higher education institutions generally. However, the findings also showed that the participants strongly agreed that group cohesion is better than individualism, and observed that people are generally very friendly in their institutions.

Therefore, drawing from the findings on institutional cultural values, it is hoped that the findings will higher education leaders and the entire faculty, non-faculty, and students to embrace a culture whereby of rules, norms, regulations, values, and routines that shape social behavior runs in their veins as blood flows in the veins to supply strength for effective functions of the entire body systems.

In terms of the student's diversity, the findings very high mean rating scores suggests that the teachers strongly agreed that they are able to adapt instruction to the needs of linguistically diverse learners. This is interesting if the perception is actionable in the classroom of different cultural backgrounds of Asian countries, African students, and other minority students from continents like the UK and US that patronize the higher education systems of the Philippines.

Furthermore, the findings revealed a very high level of students' diversity demonstrating that teachers perceive themselves as having an understanding of the underlying assumptions of students from wealthy, middle class, and generational poverty groups in their respective institutions. These findings suggests that higher education educators should consider the modification of institutional curriculum contents that may not meet the learning needs of students from different cultural backgrounds.

For example, asking adult foreign students to learn Tagalog is not in harmony with language learning theory and using Tagalog as a medium of instruction in a classroom of mixed learners from an English speaking background is detrimental to international students' academic progress and achievements. This concept is very pertinent considering the rate at which international students as flooding into the Philippines as a country to pursue their tertiary education programs.

Besides, the findings suggest that teachers were cognizant of the needs of linguistically diverse learners and consider racial diversity as an integral component of educational systems. However, the study findings were in contrast with Lin (2014) whose study demonstrated that teachers lacked a true understanding of diversity. Similarly, it was noted that teachers reported reliance on outside sources such as guest speakers and children around the world unit but failed to utilize their colleagues, parents, and their own experiences (Lin, 2014).

Moreover, the findings accentuate that the participants acclaimed that they understand the unique needs of children of poverty in the course of performing their civic pedagogical responsibilities. Likewise, the results too demonstrated that the participants explicitly included a variety of ethnic groups in the curriculum. With this indication of a high level of

students' diversity, it could be suggested that respect which strengthens relationships, creates positive connections, and builds peace among people is required of the teachers.

Besides, Saylık, Polatcan, and Saylık, (2016) posited that respect for diversity requires tolerance and understanding of differences and empathy for decreasing prejudices (Keenan, Connolly & Stevenson, 2016). As a result, it can be asserted that tolerance, accepting of differences, avoidance of prejudices and stereotypes, sensitivity, and empathy are the foundations of respect for diversity.

In consonance with the correlational analysis, the study revealed positive significant relationship between higher education tech-savviness leadership competency and students' diversity. This suggests that leaders were able to facilitate the use of technologies to support and enhance instructional teaching methods. Luckily for the students, such endeavors could help to develop students' higher-level thinking, decision-making, and problem-solving skills. It follows that the tech-savviness capability of higher education leaders could empower them to promote and enforce privacy, security, and online safety related to the use of technology within the institutions in order to mitigate undue litigations arising from employees and students unethical uses of technological tools.

Also, the results indicate that technology influences higher education leadership capacity to employ technology for communication and collaboration among colleagues, staff, parents, students, and the larger community. Apparently, that requires leaders to possess the ability to integrate strategic plans, technology plans, and other improvement plans and policies to align efforts and leverage institutional resources.

Interestingly, this study findings affirm Laurenceau et. al. (2016) results which suggested that the digital journey offers tangible benefits for business leaders and is being even more positively embraced by their employees. However, these findings contradict the Global Leader Forecast 2018 report which showed that only 22 percent of digital-era leaders considered themselves effective in driving digital by leveraging technology to modernize their business strategy and operations (Dettmann et. al. 2018).

Similarly, it has been found that disruptive technology and subsequent technological changes in response to competition had intense effects on organizations (Lahiri, Pérez-Nordtvedt & Renn, 2008). Likewise, Du and Chen (2018) amplify the tech-savviness challenge by positing that while technologies offer openings, opportunities, and efficiency, they are very disruptive in nature and pose a virtually continuous threat to conformist businesses.

Besides, the study findings showed a negative relationship between tech-savviness and ICV. This implies that higher education institutions leaders should innovate and ameliorate this negativity through further self and teachers' development programs and pieces of training in order to have wholeness in the ways technology is used to address institutional challenges. This was incongruence with scholars' findings that the introduction of digital tools affects the design of work, and, particularly, how people work together (Barley, 2015; Schwarzmüller et al., 2018).

However, that was ostensibly negated by Ng (2008) as cited in Gencer and Samur (2016) which found that strengthening school culture and building collaborative structures, could influence the integration of ICT into teaching positively. In support, Afshari, Bakar,

Luan, Samah, and Fooi (2009) as cited in Gencer et. al. (2016) found that there is a strong positive correlation between transformational leadership style and computer use.

Nevertheless, dancing from the positive correlations perspective, Kaivo-oja and Lauraeus (2018) suggested that regardless of the prevailing VUCA environment, an investment in the company or institutional leadership bridges the gap in skills deals with the technological influence and helps take the company into the projected future. Hence, it is reasonable to infer that higher education leaders should facilitate the meaningful utilization of technology appliances in institutions to ease teachers, students, and other employees' job responsibilities.

Furthermore, the study by Way, Jimmieson, and Bordia (2016) showed a positive association between relationship conflict and anxiety/depression. However, it was observed that bullying was stronger for positive supervisor conflict management style (CMS) climates than for negative supervisor conflict management style climates (Way, et al. 2016).

Besides, Raza, Akhtar, Husnain, and Akhtar (2015) found that academic staff commitment is influenced by various factors but job security and job satisfaction were the two major factors. The finding revealed that there is a significant association between teachers' job security, workload, and teachers' job satisfaction (Amir & Hussain, 2018).

On the overall, significant correlational analysis suggests that the higher education institutions which participated in the study possessed the needed competencies that could empower them face and navigate VUCA challenges when applied effectively. However, the finding also demonstrated that the leaders need to broker out ways for tackling institutional challenges encountered by teachers which were very high on salary inequality or not conforming to norms and lack of research skills.

This imperative because changes in the real world are occurring at a faster pace than the corresponding academic development, leading to the latter lagging behind (Hall, 2016). In addition, Hall furthers states academic syllabi need to incorporate VUCA as a phenomenal concept to ensure that leaders are aware of VUCA from an early developmental stage (Hall, 2016).

Conclusion

Tailoring from the overall mean score on tech-savviness, and risk and conflict management competencies as perceived by the respondents. Consequently, it was concluded that the leaders keep up with the very high level of leadership competency acumen in order to soar in highly VUCA challenging environment.

Also, deducting from the study findings on the VUCA environment identified factors as assessed by teachers, the results revealed the respondents perceived themselves as having a very high of level institutional cultural values, and students' diversity comprehension. Therefore, it was concluded that the respondents continue to explore how to intensify their pedagogical practices to reach the diverse nature of students in their classrooms.

Likewise, the findings showed negative significant mean differences on the other indicators of the leadership competencies. Thus, it was concluded that the school 4 institution leaders particularly should try to innovate and align with the other three institutions. Moreover, the study findings showed positive and significant correlations between leadership competencies

and the VUCA environment identified institutional factors. Subsequently, it was concluded that leadership competencies explored in the study could positively impact on higher education institutions leaders' responsibilities.

Theoretically, these study findings have contributed to the higher education leadership competency theory. Through this purpose and humble leadership philosophy, they position themselves and the employees in fighting the challenges of present volatile, uncertain, complex, and ambiguous economic, social, cultural, and political instability.

In essence, the findings presented in this dissertation research touch upon the core of the knowledge-based theory of higher education institutions leaders' leadership competencies and identified pertinent components of higher education areas that relate to teachers and students in the VUCA environment. Based on the findings of the study, the existence of leadership competencies is much more than having the knowledge of "being there" in terms of head knowledge proclivity in the form of awareness and perceptual attributions of employees.

Accordingly, deducting from the findings, this paper has contributed to the body of knowledge in two important ways. Firstly, the study is unique in its nature for the reason the model has never been tested in the education industry in Metro Manila (SMEC). Secondly, the study is unique in its nature due to the fact that it investigated the significant differences and direct association or relationship of leadership competencies and VUCA identified institutional factors (teaching strategies, cultural values, students' diversity, and institutional challenges encountered by higher education teachers).

Also, accounting from the challenges dissimilarities on teambuilding and culture values among the institutions' ad group, the change-oriented theoretical model conceptualized in the study has elicited support to the study. Thus the surge for higher education leaders pays particular attention about identified problems that pose substantial threats and opportunities through monitoring the environment, proposing new strategies as well as building new visions, innovative thinking encouragement and risk-taking for the advancement of change initiatives within the institutions (Yukl, Gordon & Taber, 2002).

However, practically speaking, the study is beneficial for the higher education institutions that are facing unprecedented and complex challenges such as the autocratic coronavirus crisis disrupting educational system operations. The volatility in the global and national economy and the ambiguities in managing teachers and students pedagogical practices have exerted great impact on every aspect of school sustainability.

Besides, these challenges have forced education leadership into developing policies devoid of much planning processes. Hence, the significance of the leadership competencies that may help in reducing institutional risk and conflict management and resolution competencies. It specifically provides a deep practical insight to the authorities of different educational institutions (SMEC higher education institutions in particular) to exploit contemporary leadership competency practices with the aim to overcome the challenges of VUCA eroding our educational environments and unforeseen eventualities. It's also beneficial for higher education leaders, policymakers, curriculum developers to consider the diverse nature of students in order to make education programs relevant for all learners.

Nevertheless, the study was limited by the sample of 184 participants who were permanent teachers in the higher education systems of four universities among the SMEC member colleges and universities. Hence, future researchers can explore further this study with a greater number of universities and sample size participation. That may help in the overall generalization of the study results to other institutions of the consortium.

Another angle of limitation was on the methodology, a quantitative method was used in this study, however, future researchers may utilize qualitative and/or mixed-method which may help in shedding greater insight into the concept of leadership competencies in a VUCA environment among SMEC higher education institutions.

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